

1	Q	I	V	L	T	Q	S	P	A	I	M	S	A	S	P	G	E	K	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	C	S	A	S	S	S	I		S	Y	M	H	W	F	Q	Q	K	P
21	I	T	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>I</u>	<u>N</u>	<u>T</u>	<u>W</u>	<u>L</u>	<u>A</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>
40	G	T	S	P	K	L	W	I	Y	T	T	S	N	L	A	S	G	V	P	A
41	G	K	A	P	K	L	L	<u>M</u>	<u>Y</u>	<u>K</u>	<u>A</u>	<u>S</u>	<u>S</u>	<u>L</u>	<u>E</u>	<u>S</u>	G	V	P	<u>S</u>
60	R	F	S	G	S	G	S	G	T	S	Y	S	L	T	I	S	R	M	E	A
61	R	F	<u>I</u>	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
80	E	D	A	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	S
81	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>Y</u>	<u>N</u>	<u>S</u>	<u>D</u>	<u>S</u>	<u>K</u>	<u>M</u>	<u>F</u>	<u>G</u>	<u>Q</u>
100	G	T	K	L	E	L	K													
101	G	T	K	V	E	V	K													

FIGURE 1A

1	Q	V	Q	L	Q	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	M
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	Y	T	F	T	S	Y	R	M	H	W	V	K	Q	R
21	S	C	K	A	S	G	<u>G</u>	<u>T</u>	<u>F</u>	<u>S</u>	<u>R</u>	<u>S</u>	<u>A</u>	<u>I</u>	<u>I</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	Q	G	L	E	W	I	G	Y	I	N	P	S	T	G	Y	T	E	Y
41	P	G	Q	G	L	E	W	<u>M</u>	<u>G</u>	<u>G</u>	<u>I</u>	<u>V</u>	<u>P</u>	<u>M</u>	<u>F</u>	<u>G</u>	<u>P</u>	<u>P</u>	<u>N</u>	<u>Y</u>
61	N	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	S	T	A	Y
61	<u>A</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>Q</u>	<u>G</u>	<u>R</u>	<u>V</u>	<u>T</u>	<u>I</u>	<u>T</u>	<u>A</u>	<u>D</u>	<u>E</u>	<u>S</u>	<u>T</u>	<u>N</u>	<u>T</u>	<u>A</u>	<u>Y</u>
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G	
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>F</u>	<u>Y</u>	<u>F</u>	<u>C</u>	<u>A</u>	<u>G</u>	<u>G</u>	<u>Y</u>
100	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	V	S	S			
101	<u>G</u>	<u>I</u>	<u>Y</u>	<u>S</u>	<u>P</u>	<u>E</u>	<u>E</u>	<u>Y</u>	<u>N</u>	G	<u>G</u>	L	V	T	V	S	S			

FIGURE 1B

1	D	I	V	L	T	Q	S	P	A	S	L	A	V	S	L	G	Q	R	A	T
1	E	I	V	M	T	Q	S	P	<u>A</u>	T	L	S	V	S	P	G	E	R	A	T
21	I	S	C	R	A	S	Q	S	V	S	T	S	T	Y	N	Y	M	H	W	Y
21	L	S	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>V</u>	<u>S</u>	<u>T</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>N</u>	<u>Y</u>	<u>M</u>	<u>H</u>	<u>W</u>	<u>Y</u>
41	Q	Q	K	P	G	Q	P	P	K	L	L	I	K	Y	A	S	N	L	E	S
41	Q	Q	K	P	<u>G</u>	<u>Q</u>	S	P	R	L	L	I	<u>K</u>	<u>Y</u>	<u>A</u>	<u>S</u>	<u>N</u>	<u>L</u>	<u>E</u>	<u>S</u>
61	G	V	P	A	R	F	S	G	S	G	F	G	T	D	F	T	L	N	I	H
61	G	I	P	A	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S
81	P	V	E	E	E	D	T	V	T	Y	Y	C	Q	H	S	W	E	I	P	Y
81	<u>R</u>	<u>L</u>	<u>E</u>	S	E	D	F	A	V	Y	Y	C	<u>Q</u>	<u>H</u>	<u>S</u>	<u>W</u>	<u>E</u>	<u>I</u>	<u>P</u>	<u>Y</u>
101	T	F	G	G	G	T	K	L	E	I	K									
101	T	F	G	Q	G	T	R	V	E	I	K									

FIGURE 2A

1	E	M	I	L	V	E	S	G	G	G	L	V	K	P	G	A	S	L	K	L
1	E	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
21	S	C	A	A	S	G	F	T	F	S	N	Y	G	L	S	W	V	R	Q	T
21	S	C	A	A	S	G	F	T	F	S	<u>N</u>	<u>Y</u>	<u>G</u>	<u>L</u>	<u>S</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	S	D	R	R	L	E	W	V	A	S	I	S	R	G	G	G	R	I	Y	S
41	P	G	K	G	L	E	W	V	A	<u>S</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>G</u>	<u>G</u>	<u>G</u>	<u>R</u>	<u>I</u>	<u>Y</u>	<u>S</u>
61	P	D	N	L	K	G	R	F	T	I	S	R	E	D	A	K	N	T	L	Y
61	<u>P</u>	<u>D</u>	<u>N</u>	<u>L</u>	<u>K</u>	<u>G</u>	<u>R</u>	<u>F</u>	<u>T</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>N</u>	<u>D</u>	<u>S</u>	<u>K</u>	<u>N</u>	<u>T</u>	<u>L</u>	<u>Y</u>
81	L	Q	M	S	S	L	K	S	E	D	T	A	L	Y	Y	C	L	R	E	G
81	L	<u>Q</u>	M	N	S	L	Q	A	E	D	T	A	L	Y	Y	C	<u>L</u>	<u>R</u>	<u>E</u>	<u>G</u>
101	I	Y	Y	A	D	Y	G	F	F	D	V	W	G	T	G	T	T	V	I	V
101	<u>I</u>	<u>Y</u>	<u>Y</u>	<u>A</u>	<u>D</u>	<u>Y</u>	<u>G</u>	<u>F</u>	<u>F</u>	<u>D</u>	<u>V</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>
121	S	S																		
121	S	S																		

FIGURE 2B

1	D	I	V	M	T	Q	S	H	K	F	M	S	T	S	V	G	D	R	V	S	
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T	
21	I	T	C	K	A	S	Q	D	V	G	S	A	V	V	W	H	Q	Q	K	S	
21	I	T	C	<u>K</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>D</u>	<u>V</u>	<u>G</u>	<u>S</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>W</u>	<u>H</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>	
41	G	Q	S	P	K	L	L	I	Y	W	A	S	T	R	H	T	G	V	P	D	
41	G	K	A	P	<u>K</u>	<u>L</u>	<u>L</u>	<u>I</u>	<u>Y</u>	<u>W</u>	<u>A</u>	<u>S</u>	<u>T</u>	<u>R</u>	<u>H</u>	<u>T</u>	<u>G</u>	<u>V</u>	<u>P</u>	<u>S</u>	
61	R	F	T	G	S	G	S	G	T	D	F	T	L	T	I	T	N	V	Q	S	
61	R	F	<u>T</u>	<u>G</u>	<u>S</u>	<u>G</u>	<u>S</u>	<u>G</u>	<u>T</u>	<u>E</u>	<u>F</u>	<u>T</u>	<u>L</u>	<u>T</u>	<u>I</u>	<u>S</u>	<u>S</u>	<u>L</u>	<u>Q</u>	<u>P</u>	
81	E	D	L	A	D	Y	F	C	Q	Q	Y	S	I	F	P	L	T	F	G	A	
81	D	D	F	A	T	Y	<u>F</u>	<u>C</u>	<u>Q</u>	<u>Q</u>	<u>Y</u>	<u>S</u>	<u>I</u>	<u>F</u>	<u>P</u>	<u>L</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>	
101	G	T	R	L	E	L	K														
101	G	T	K	V	E	V	K														

FIGURE 3A

1	Q	V	Q	L	Q	Q	S	D	A	E	L	V	K	P	G	A	S	V	K	I	
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V	
21	S	C	K	V	S	G	Y	T	F	T	D	H	T	I	H	W	M	K	Q	R	
21	S	C	K	A	S	G	<u>Y</u>	<u>T</u>	<u>F</u>	<u>T</u>	<u>D</u>	<u>H</u>	<u>T</u>	<u>I</u>	<u>H</u>	<u>W</u>	<u>M</u>	<u>R</u>	<u>Q</u>	<u>A</u>	
41	P	E	Q	G	L	E	W	F	G	Y	I	Y	P	R	D	G	H	T	R	Y	
41	P	G	Q	G	L	E	<u>W</u>	<u>F</u>	<u>G</u>	<u>Y</u>	<u>I</u>	<u>Y</u>	<u>P</u>	<u>R</u>	<u>D</u>	<u>G</u>	<u>H</u>	<u>T</u>	<u>R</u>	<u>Y</u>	
61	S	E	K	F	K	G	K	A	T	L	T	A	D	K	S	A	S	T	A	Y	
61	<u>A</u>	<u>E</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>G</u>	<u>K</u>	<u>A</u>	<u>T</u>	<u>I</u>	<u>T</u>	<u>A</u>	<u>D</u>	<u>E</u>	<u>S</u>	<u>T</u>	<u>N</u>	<u>T</u>	<u>A</u>	<u>Y</u>	
81	M	H	L	N	S	L	T	S	E	D	S	A	V	Y	F	C	A	R	G	R	
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>F</u>	<u>C</u>	<u>A</u>	<u>R</u>	<u>G</u>	<u>R</u>	
101	D	S	R	E	R	N	G	F	A	Y	W	G	Q	G	T	L	V	T	V	S	
101	<u>D</u>	<u>S</u>	<u>R</u>	<u>E</u>	<u>R</u>	<u>N</u>	<u>G</u>	<u>F</u>	<u>A</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	
121	A																				
121	S																				

FIGURE 3B

1	D	I	V	L	T	Q	S	P	A	S	L	A	V	S	L	G	Q	R	A	T
1	D	I	Q	M	T	Q	S	P	S	<u>S</u>	L	S	A	S	V	G	D	R	V	T
21	I	S	C	R	A	S	E	S	V	D	N	Y	G	I	S	F	M	N	W	F
21	I	T	C	R	A	S	E	S	V	D	N	Y	G	I	S	F	M	N	W	<u>F</u>
41	Q	Q	K	P	G	Q	P	P	K	L	L	I	Y	A	A	S	N	Q	G	S
41	Q	Q	K	P	G	K	A	P	K	L	L	<u>I</u>	Y	<u>A</u>	A	S	N	Q	G	S
61	G	V	P	A	R	F	S	G	S	G	S	G	T	D	F	S	L	N	I	H
61	G	V	P	S	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	N	I	S
81	P	M	E	E	D	D	T	A	M	Y	F	C	Q	Q	S	K	E	V	P	W
81	S	L	Q	P	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>S</u>	<u>K</u>	<u>E</u>	<u>V</u>	<u>P</u>	<u>W</u>
101	T	F	G	G	G	T	K	L	E	I	K									
101	<u>T</u>	<u>F</u>	G	Q	G	T	K	V	E	<u>I</u>	K									

FIGURE 4A

1	E	V	Q	L	Q	Q	S	G	P	E	L	V	K	P	G	A	S	V	K	I
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	Y	T	F	T	D	Y	N	M	H	W	V	K	Q	S
21	S	C	K	A	S	G	<u>Y</u>	T	F	<u>T</u>	<u>D</u>	<u>Y</u>	<u>N</u>	<u>M</u>	<u>H</u>	W	V	R	Q	A
41	H	G	K	S	L	E	W	I	G	Y	I	Y	P	Y	N	G	G	T	G	Y
41	P	G	Q	G	L	E	W	<u>I</u>	G	<u>Y</u>	<u>I</u>	<u>Y</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>G</u>	<u>Y</u>
61	N	Q	K	F	K	S	K	A	T	L	T	V	D	N	S	S	S	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>S</u>	<u>K</u>	<u>A</u>	<u>T</u>	I	T	A	D	E	S	T	N	T	A	Y
81	M	D	V	R	S	L	T	S	E	D	S	A	V	Y	Y	C	A	R	G	R
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	C	A	<u>R</u>	<u>G</u>	<u>R</u>
101	P	A	M	D	Y	W	G	Q	G	T	S	V	T	V	S	S				
101	<u>P</u>	<u>A</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	L	V	T	V	S	S				

FIGURE 4B

1	Q	I	V	L	T	Q	S	P	A	I	M	S	A	S	P	G	E	K	V	T
1	D	I	Q	M	T	Q	S	P	S	S	L	S	<u>A</u>	S	V	G	D	R	V	T
21	M	T	C	S	G	S	S	S	V	S	F	M	Y	W	Y	Q	Q	R	P	G
21	I	T	C	<u>S</u>	<u>G</u>	<u>S</u>	<u>S</u>	<u>S</u>	<u>V</u>	<u>S</u>	<u>F</u>	<u>M</u>	<u>Y</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>	<u>G</u>
41	S	S	P	R	L	L	I	Y	D	T	S	N	L	A	S	G	V	P	V	R
41	<u>K</u>	A	P	K	L	L	I	Y	<u>D</u>	<u>T</u>	<u>S</u>	<u>N</u>	<u>L</u>	<u>A</u>	<u>S</u>	G	V	P	S	R
61	F	S	G	S	G	S	G	T	S	Y	S	L	T	I	S	R	M	E	A	E
61	F	S	G	S	G	S	G	T	D	<u>Y</u>	T	F	T	I	S	S	L	Q	P	E
81	D	A	A	T	Y	Y	C	Q	Q	W	S	T	Y	P	L	T	F	G	A	G
81	D	I	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>W</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>P</u>	<u>L</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>	<u>G</u>
101	T	K	L	E	L	K														
101	T	K	V	E	V	K														

FIGURE 5A

1	Q	V	Q	L	K	Q	S	G	P	G	L	V	Q	P	S	Q	S	L	S	I
1	<u>E</u>	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	Q	S	L	R	L
21	T	C	T	V	S	G	F	S	V	T	S	Y	G	V	H	W	I	R	Q	S
21	S	C	A	A	S	G	F	T	<u>V</u>	<u>T</u>	<u>S</u>	<u>Y</u>	<u>G</u>	<u>V</u>	<u>H</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	K	G	L	E	W	L	G	V	I	W	S	G	G	S	T	D	Y	N
41	P	G	K	G	L	E	W	V	<u>G</u>	<u>V</u>	<u>I</u>	<u>W</u>	<u>S</u>	<u>G</u>	<u>G</u>	<u>S</u>	<u>T</u>	<u>D</u>	<u>Y</u>	<u>N</u>
61	A	A	F	I	S	R	L	T	I	S	K	D	N	S	K	S	Q	V	F	F
61	<u>A</u>	<u>A</u>	<u>F</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>F</u>	<u>T</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>D</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>N</u>	<u>T</u>	<u>L</u>	<u>Y</u>	<u>L</u>
81	K	V	N	S	L	Q	P	A	D	T	A	I	Y	Y	C	A	R	A	G	D
81	Q	M	N	<u>S</u>	L	Q	A	E	<u>D</u>	<u>T</u>	A	I	Y	Y	C	A	R	<u>A</u>	<u>G</u>	<u>D</u>
101	Y	N	Y	D	G	F	A	Y	W	G	Q	G	T	L	V	T	V	S	A	
101	<u>Y</u>	<u>N</u>	<u>Y</u>	<u>D</u>	<u>G</u>	<u>F</u>	<u>A</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>S</u>	

FIGURE 5B

1	D	I	V	L	T	Q	S	P	A	T	L	S	V	T	P	G	D	S	V	S
1	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T
21	L	S	C	R	A	S	Q	S	I	S	N	N	L	H	W	Y	Q	Q	K	S
21	L	S	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>I</u>	<u>S</u>	<u>N</u>	<u>N</u>	<u>L</u>	<u>H</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>
41	H	E	S	P	R	L	L	I	K	Y	A	S	Q	S	I	S	G	I	P	S
41	G	Q	A	P	R	L	L	I	<u>K</u>	<u>Y</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>I</u>	<u>S</u>	G	I	P	D
61	R	F	S	G	S	G	S	G	T	D	F	T	L	S	V	N	G	V	E	T
61	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L	E	P
81	E	D	F	G	M	Y	F	C	Q	Q	S	N	S	W	P	H	T	F	G	G
81	E	D	F	A	V	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>S</u>	<u>N</u>	<u>S</u>	<u>W</u>	<u>P</u>	<u>H</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>
101	G	T	K	L	E	I	K													
101	G	T	K	V	E	I	K													

FIGURE 6A

1	E	V	Q	L	Q	Q	S	G	P	E	L	V	K	P	G	A	S	M	K	I
1	Q	V	Q	L	<u>V</u>	Q	S	G	A	E	V	K	K	P	G	S	S	V	R	V
21	S	C	K	A	S	V	Y	S	F	T	G	Y	T	M	N	W	V	K	Q	S
21	S	C	K	<u>A</u>	<u>S</u>	<u>G</u>	<u>Y</u>	<u>S</u>	<u>F</u>	<u>T</u>	<u>G</u>	<u>Y</u>	<u>T</u>	<u>M</u>	<u>N</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	H	G	Q	N	L	E	W	I	G	L	I	N	P	Y	N	G	G	T	S	Y
41	P	G	K	G	L	E	W	V	G	<u>L</u>	<u>I</u>	<u>N</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>S</u>	<u>Y</u>
61	N	Q	K	F	K	G	K	A	T	L	T	V	D	K	S	S	N	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>G</u>	<u>R</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>L</u>	<u>K</u>	<u>P</u>	<u>S</u>	<u>F</u>	<u>N</u>	<u>Q</u>	<u>A</u>	<u>Y</u>
81	M	E	L	L	S	L	T	S	A	D	S	A	V	Y	Y	C	T	R	R	G
81	M	E	L	S	S	L	F	S	E	D	T	A	V	Y	Y	C	<u>T</u>	<u>R</u>	<u>R</u>	<u>G</u>
101	F	R	D	Y	S	M	D	Y	W	G	Q	G	T	S	V	T	V	S	S	
101	<u>F</u>	<u>R</u>	<u>D</u>	<u>Y</u>	<u>S</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>S</u>	

FIGURE 6B

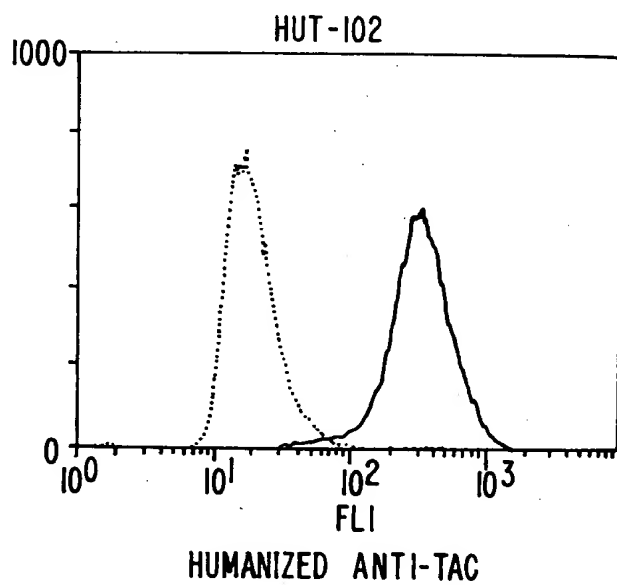


FIGURE 7A

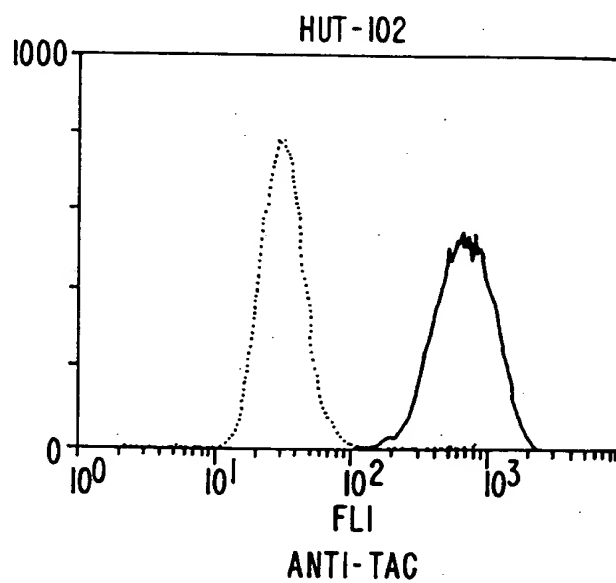


FIGURE 7B

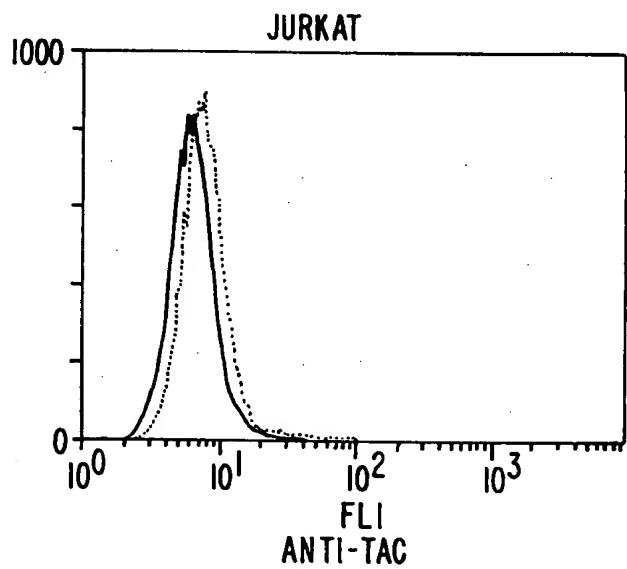


FIGURE 7C

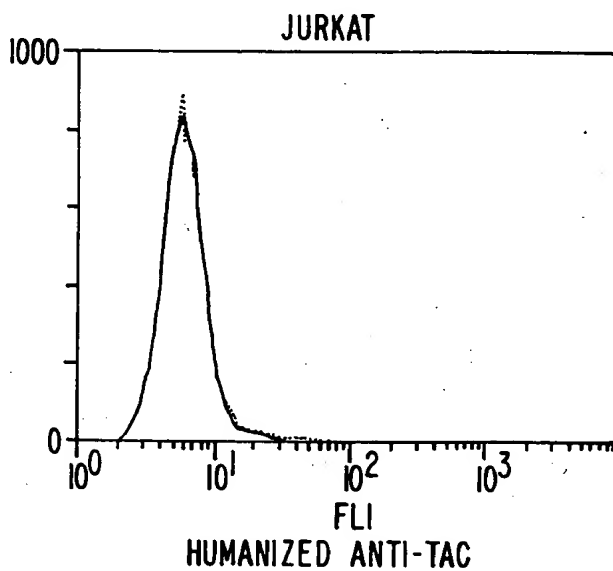


FIGURE 7D

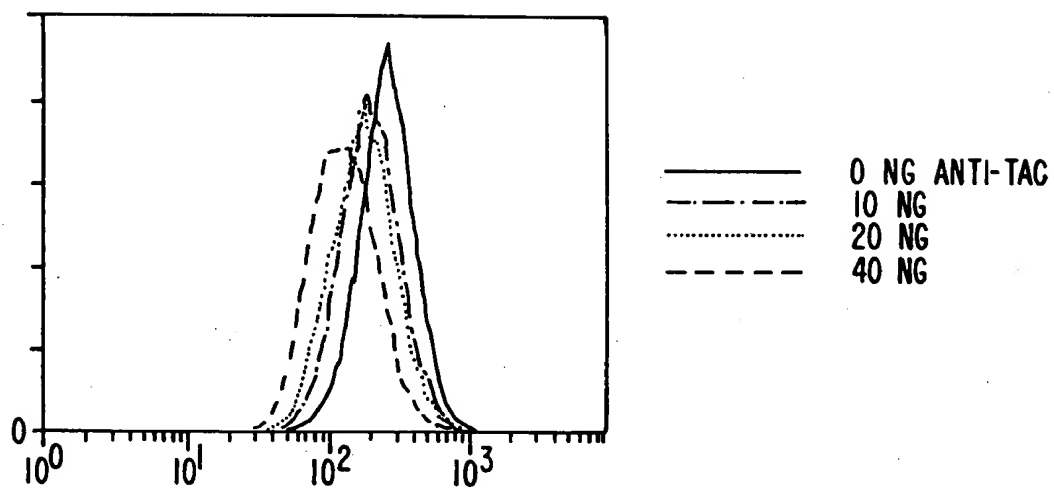


FIGURE 8A

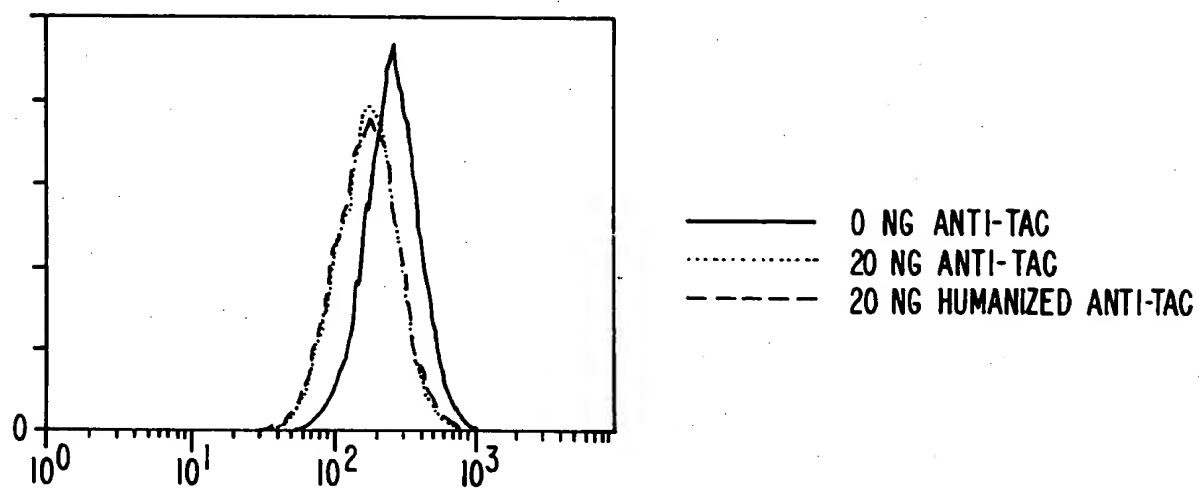


FIGURE 8B



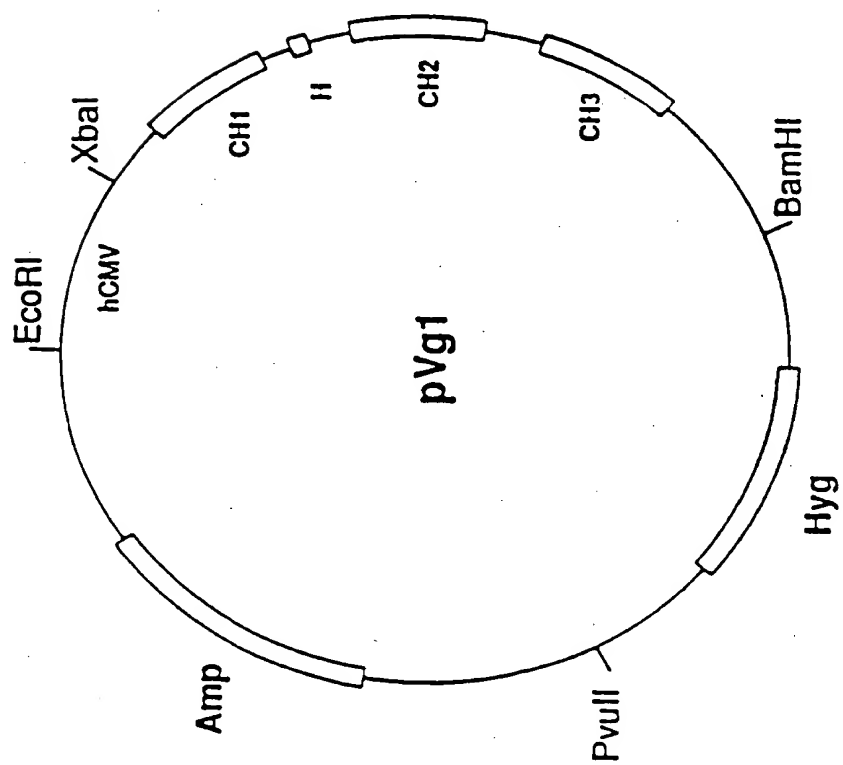


FIGURE 9A

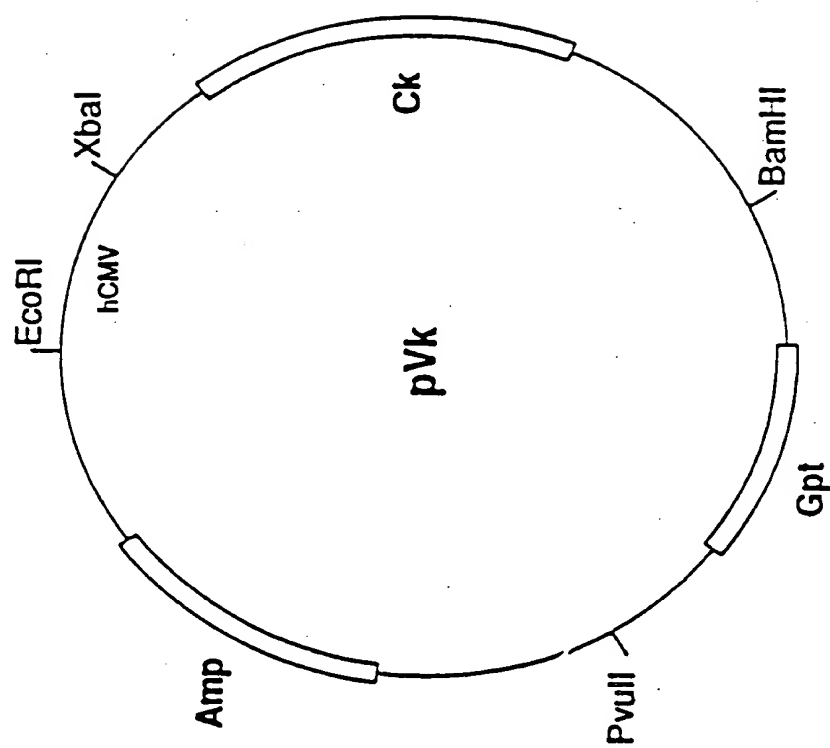


FIGURE 9B

Q	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
Q	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
S	S	C	K	A	S	G	Y	T	F	T	S	Y	R	M	H	W	V	R	Q	A
S	S	C	K	A	S	G	G	T	F	S	S	Y	R	M	H	W	V	R	Q	A
P	P	G	Q	G	L	E	W	I	G	Y	I	N	P	S	T	G	Y	T	E	Y
P	P	G	Q	G	L	E	W	M	G	Y	I	N	P	S	T	G	Y	T	E	Y
N	N	Q	K	F	K	D	K	A	T	I	T	A	D	E	S	T	N	T	A	Y
N	N	Q	K	F	K	D	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
M	M	E	L	S	S	L	R	S	E	D	T	A	V	Y	Y	C	A	R	G	G
M	M	E	L	S	S	L	R	S	E	D	T	A	F	Y	F	C	A	G	G	G
G	V	F	D	Y	Y	W	G	Q	G	T	L	V	T	V	S	S	S			
G	V	F	D	Y	Y	E	Y	N	G	C	L	V	T	V	S	S	S			

FIGURE 10A

D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
I	T	C	S	A	S	S	S	S	I	S	Y	H	W	Y	Q	Q	K	P	G
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
I	T	C	S	A	S	S	S	S	I	S	Y	H	W	Y	Q	Q	K	P	G
K	A	P	K	L	L	L	L	L	T	S	N	L	A	S	G	V	P	A	R
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
K	A	P	K	L	L	L	L	L	T	S	N	L	A	S	G	V	P	A	R
F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
F	I	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D
D	F	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	Q	G
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
D	F	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	Q	G
T	K	V	E	V	K														
:	:	:	:	:	:														
T	K	V	E	V	K														

FIGURE 10B

10	20	30	40	50	60	70
ACCTTCTAGA	TGGGATGGAG	CTGGATCTTT	CTCTTCTCTCC	TGTCAGGTAC	CGCGGGCGTG	CACTCTCAGG
TGGAAGATCT	ACCCTACCTC	GACCTAGAAA	GAGAAGGAGG	ACAGTCCATG	CGGCCCGCAC	GTGAAGAGTCC
80	90	100	110	120	130	140
TCCAGCTTGT	CCAGTCTGGG	GCTGAAGTCA	AGAAACCTGG	CTCGAGGCGT	AAGGTCTCCT	GCAAGGCTTC
AGGTGGAACA	GGTCAGACCC	CGACTTCAGT	TCTTTGGACC	GAGCTCGCAC	TTCCAGAGGA	CGTTCGGAAG
150	160	170	180	190	200	210
TGCGCGGACC	TTTTCTAGCT	ACAGGATGCA	CTGGGTAAGG	CAGGCCCTCTG	GACAGGGTCT	GGAATGGATG
ACCGCCCTGG	AAAGATCGA	TGTCCTACGT	GACCCATTCC	GTCCGGGGAC	CTGTCCCAGA	CCTTACCTAC
220	230	240	250	260	270	280
GGATATATTA	ATCCGTGCGAC	TGGGTATACT	GAATACAATC	AGAAATTCAA	GGACAGGGTC	ACAATTACTG
CCTATATAAT	TAGGCAGCTG	ACCCATATGA	CTTATGTTAG	TCTTCAAGTT	CCTGTCCCAG	TGTTAATGAC
290	300	310	320	330	340	350
CAGACGAATC	CACCAATACA	GCCTACATGG	AACTGAGCAG	CCTGAGATCT	GAGGACACCG	CATTCTATTT
GTCTGCTTAG	GTGGTTATGT	CGGATGTACC	TTGACTCGTC	GGACTCTAGA	CTCCTGTGGC	GTAAGATAAA
360	370	380	390	400	410	420
CTGTGCAGGG	GGTGGGGGAG	TCTTTGACTA	CGAATACAAT	GGAGGGCTGG	TCACAGTCTC	CTCAGGTGAG
GACAGGTCCC	CCACCCCTC	AGAACTGAT	GCTTAIGTTA	CCTCCCGACC	AGTGTGAGAG	GAGTCCCACTC
430	440					
TCCTTAAAC	CTCTAGACGA	TAT				
AGGAATTTTG	GAGATCTGCT	ATA				

FIGURE 11A

10	20	30	40	50	60	70
CAAATCTAGA	TGGAGACCGA	TACCCCTCCTG	CTATGGGTCC	TCCTGCTATG	GGTCCCAGGA	TCAACCGGAG
GTTTAGATCT	ACCTCTGGCT	ATGGGAGGAC	GATACCCACG	AGGACGATAC	CCAGGGTCTCT	AGTTGGCCTC
80	90	100	110	120	130	140
ATATTCAGAT	GACCCAGTCT	CCATCTACCC	TCTCTGCTAG	CGTCGGGGAT	AGGCTCACCA	TAACCTGCTC
TATAAGTCTA	CTGGGTCAGA	GGTAGATGGG	AGAGACGATC	GCAGCCCTTA	TCCCAGTGGT	ATTGGACGAG
150	160	170	180	190	200	210
TCCCAGCTCA	AGTATAAGTT	ACATGCCACTG	GTACCAGCAG	AAGCCAGGCA	AAGCTCCCAA	GCTTCTAATG
ACGGTCGAGT	TCATATTCAA	TGTACGTGAC	CATGGTCGTC	TTCGGTCCGT	TTCGAGGGTT	CGAAGATTAC
220	230	240	250	260	270	280
TATACCAT	CCAACTGGC	TTCTGGAGTC	CCTTCTCGCT	TCATTGGCAG	TGGATCTGGG	ACCGAGTTCA
ATATGGTGTA	GTTGGACCG	AAGACCTCAG	GGAAGAGCGA	AGTAACCGTC	ACCTAGACCC	TGGCTCAAGT
290	300	310	320	330	340	350
CCCTCACAAAT	CAGCTCTCTG	CAGCCAGATG	ATTTCGCCAC	TTATTACTGC	CATCAAAGGA	GTACTTACCC
GGGAGTGTTA	GTCGAGAGAC	GTCGGTCTAC	TAAAGCGGTG	AATAATGACG	GTAGTTTCTT	CATGATGCGG
360	370	380	390	400		
ACTCACGTTT	GGTCAGGGGA	CCAAGGTGGA	GGTCAAACGT	AAGTACACTT	TTCTAGATAT	A
TGAGTGCAAG	CCAGTCCCCT	GGTTCCACCT	CCAGTTTGCA	TTCATGTGAA	AGATCTATA	T

FIGURE 11B

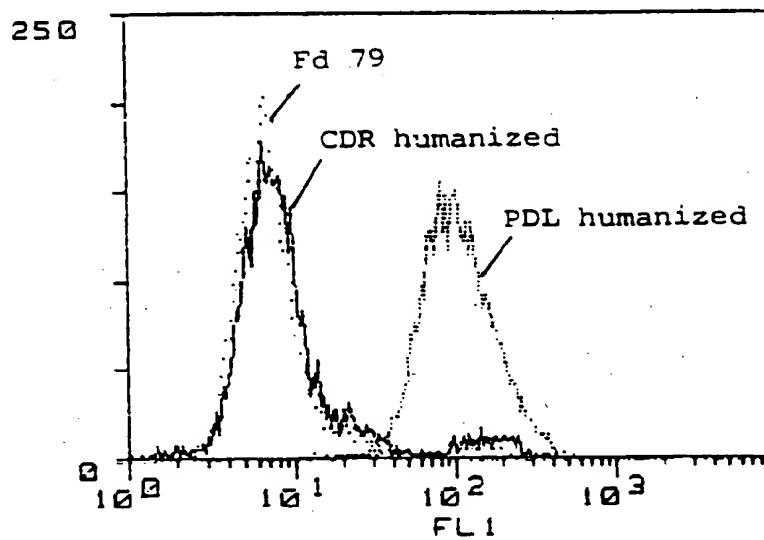


FIGURE 12

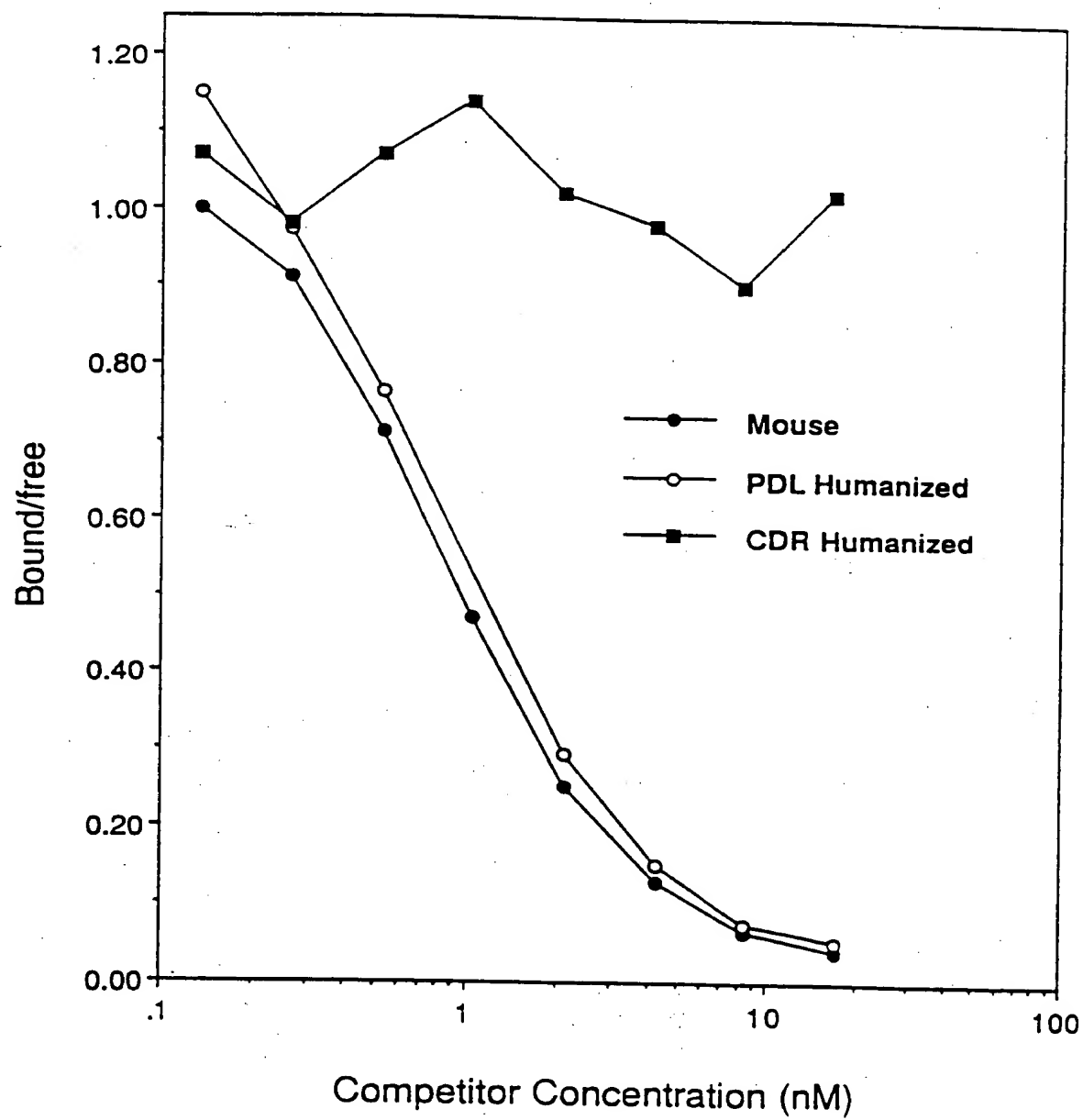


FIGURE 13

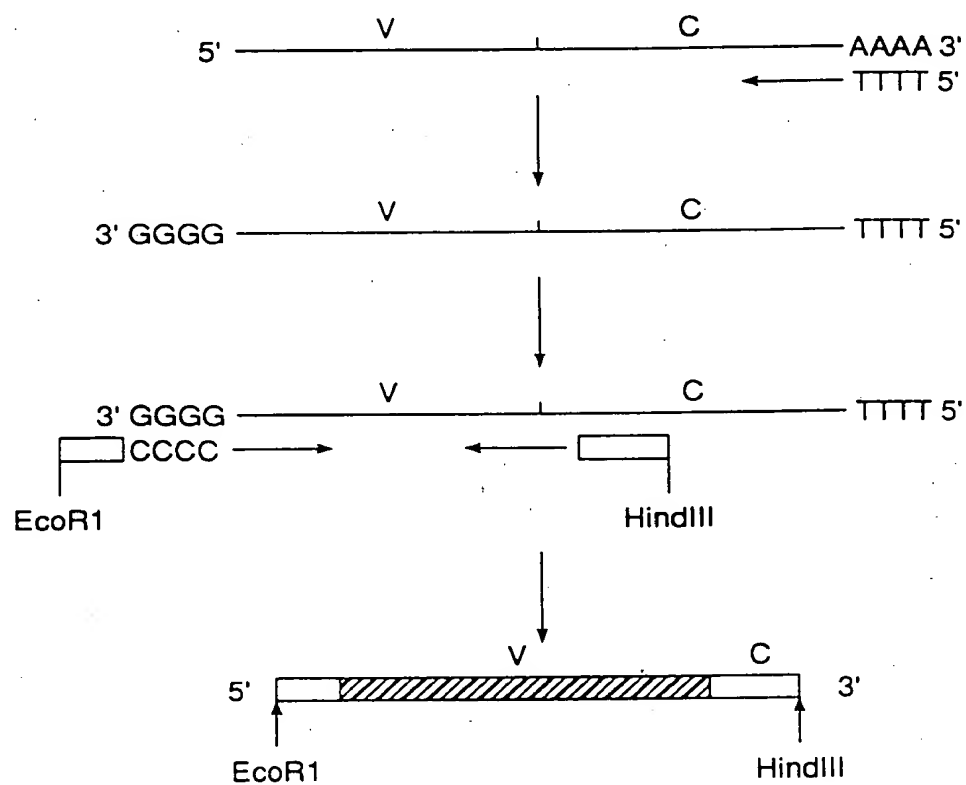


FIGURE 14



1	Q	V	Q	L	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	M
1	Q	V	Q	L	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	M
21	S	C	K	A	S	Y	T	F	T	S	Y	R	M	H	W	V	K	Q	R
21	S	C	K	A	S	Y	T	F	T	S	Y	R	M	H	W	V	K	Q	R
41	P	G	Q	G	L	E	I	G	Y	I	N	P	S	T	G	Y	T	E	Y
41	P	G	Q	G	L	E	I	G	Y	I	N	P	S	T	G	Y	T	E	Y
61	N	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	T	A	Y
61	A	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	T	A	Y
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G
100	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	V	S	S	S	S
101	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	V	S	S	S	S

FIGURE 15

1	Q	I	V	L	T	Q	S	P	A	I	M	S	A	S	P	G	E	K	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	G	S	A	S	S	S	I	S	Y	M	H	W	F	Q	Q	K	P	
21	I	T	G	R	A	S	Q	S	I	N	T	W	L	A	W	Y	Q	K	P	
40	G	T	S	P	K	L	L	W	I	T	T	S	N	L	A	S	G	V	P	
41	G	K	A	P	K	L	L	L	M	Y	K	A	S	S	E	S	G	V	P	
60	R	F	S	G	S	G	S	S	G	T	S	Y	S	L	T	I	S	R	M	
61	R	F	S	G	S	G	S	S	G	T	S	Y	S	L	T	I	S	R	M	
80	E	D	A	A	T	Y	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	
81	D	D	F	A	T	Y	Y	Y	C	Q	Q	Y	N	S	D	S	K	M	F	
100	G	T	K	L	E	L	L	K												
101	G	T	K	L	E	L	L	K												

FIGURE 16

10 20 30 40 50 60  
 TCTAGATGGGATGGAGCTGGATCTTTCTCTTCCTCCTGTCAGGTACCGCGGGCGGTGCACT  
 M G W S W I F L F L L S G T A G V H  
 70 80 90 100 110 120  
 CTCAGGTCCAGCTTGTCCAGTCTGGGGCTGAAGTCAAGAAACCTGGCTCGAGCGTGAAGG  
 S Q V Q L V Q S G A E V K K P G S S V K  
 130 140 150 160 170 180  
 TCTCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAGGCAGG  
 V S C K A S G Y T F T S Y R M H W V R Q  
 190 200 210 220 230 240  
 CCCCTGGACAGGGTCTGGAATGGATTGGATATATTAATCCGTGCACTGGGTATACTGAAT  
 A P G Q G L E W I G Y I N P S T G Y T E  
 250 260 270 280 290 300  
 ACAATCAGAAGTTCAAGGACAAGGCAACAATTACTGCAGACGAATCCACCAATACAGCCT  
 Y N Q K F K D K A T I T A D E S T N T A  
 310 320 330 340 350 360  
 ACATGGAAGTGAAGCAGCCTGAGATCTGAGGACACCGCAGTCTATTACTGTGCAAGAGGGG  
 Y M E L S S L R S E D T A V Y Y C A R G  
 370 380 390 400 410 420  
 GGGGGGTCTTTGACTACTGGGGCCAAGGAACCCTGGTCACAGTCTCCTCAGGTGAGTCCT  
 G G V F D Y W G Q G T L V T V S S  
 430  
 TAAACCTCTAGA

FIGURE 17

10 20 30 40 50 60  
 TCTAGATGGAGACCGATACCCCTCCTGCTATGGGTCCCTGCTATGGGTCCCAGGATCAA  
 M E T D T L L L W V L L L W V P G S  
 70 80 90 100 110 120  
 CCGGAGATATTCAGATGACCCAGTCTCCATCTACCCTCTCTGCTAGCGTCGGGGATAGGG  
 T G D I Q M T Q S P S T L S A S V G D R  
 130 140 150 160 170 180  
 TCACCATAACCTGCTCTGCCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGC  
 V T I T C S A S S S I S Y M H W Y Q Q K  
 190 200 210 220 230 240  
 CAGGCAAAGCTCCCAAGCTTCTAATTTATACCACATCCAACCTGGCTTCTGGAGTCCCTG  
 P G K A P K L L I Y T T S N L A S G V P  
 250 260 270 280 290 300  
 CTCGCTTCAGTGGCAGTGGATCTGGGACCGAGTTCACCCTCACAATCAGCTCTCTGCAGC  
 A R F S G S G S G T E F T L T I S S L Q  
 310 320 330 340 350 360  
 CAGATGATTTGCGCACTTATTACTGCCATCAAAGGAGTACTTACCCACTCACGTTCCGGTC  
 P D D F A T Y Y C H Q R S T Y P L T F G  
 370 380 390 400  
 AGGGGACCAAGGTGGAGGTCAAACGTAAGTACACTTTTCTAGA  
 Q G T K V E V K

FIGURE 18

HES12 AGCTTCTAGATGGGATGGAGCTGGATCTTTCTCTTCCCTCCTGTCAGGTACCGCGGGCGTG  
 CACTCTCAGGTCAGCTTGTCCAGTCTGGGGCTGAAGTCAAGAAACCTGGCTCGAGCGTG  
 AAGGTC

HES13 CGCAGTCGACGGATTAAATATATCCAATCCAATCCAGACCCCTGTCCAGGGGCTTGCCTTAC  
 CCAGTGCAATCCTGTAGCTAGTAAGGTGTAGCCAGAGCCCTTGCAGGAGACCTTCACGGCT  
 CGAGCCAGG

HES14 TATA TTAATCCGTCGACTGGGTATACTGAATACAAATCAGAAGTTCAAGGACAAGGCAACA  
 ATTACTGCAGACGAATCCACCAATACAGCCTACATGGAAC TGAGCAGCCCTGAGATCTGAG  
 GACA

HES15 ATATCGTCTAGAGGTTTTAAGGACTCACCTGAGGAGACTGTGACCAGGGTTCCTTGGCCC  
 CAGTAGTCAAAGACCCCCCTCTTGCACAGTAATAGACTGGGGTGTCTCTCAGATCTC  
 AGGCTGCT

FIGURE 19A



FIGURE 19B

JFD1 CAAATCTAGATGGAGACCGATACCGCTCGTGCTATGCGTCTGCTGCTATGCGTCCGAGGA  
TCAACCGGAGATATTGAGATGACCCAGTCTCCATCTACCCCTCTCTGCTAGCGTGGGGGAT

JFD2 ATAAATTAGAAGCTTGGGAGCTTTGGCTGGCTTCTGCTGGTACCAGTGCATGTAACTTAT  
ACTTGAGCTGGCAGAGCAGGTTATGGTGACCCCTATCCCCGACGCTAGCAGAGAG

JFD3 GCTCCGAAGCTTCTAATTTATAGCAGATCCAAAGCTGGCTTCTGGAGTCCCTGCTCGCTTC  
AGTGGCAGTGGATCTGGCACCAGTTTACCCCTCACAATCAGCTCTCTGCAGCCAGATGAT  
TTC

JFD4 TATACTAGAAAAGTGTACTTACGTTTGACCTCCACCTTGGTCCCTGACCGAACGTGAG  
TGGGTAAGTACTCCTTTGATGGCAGTAATAAGTGGCGAAATCATCTGGCTGCAGAGAGCT  
GA

FIGURE 20A

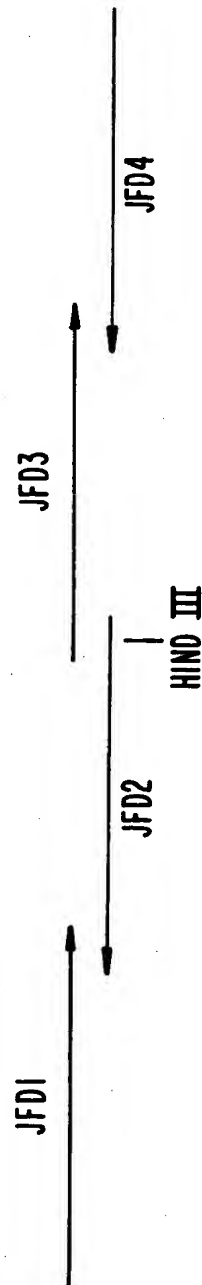


FIGURE 20B

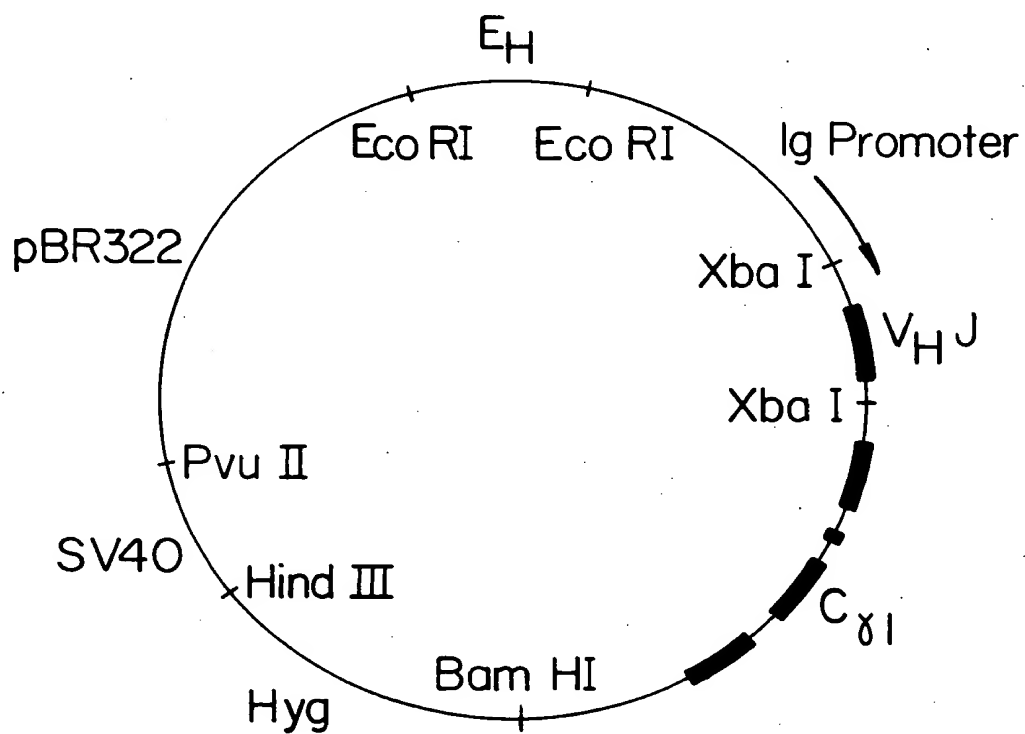


FIGURE 21

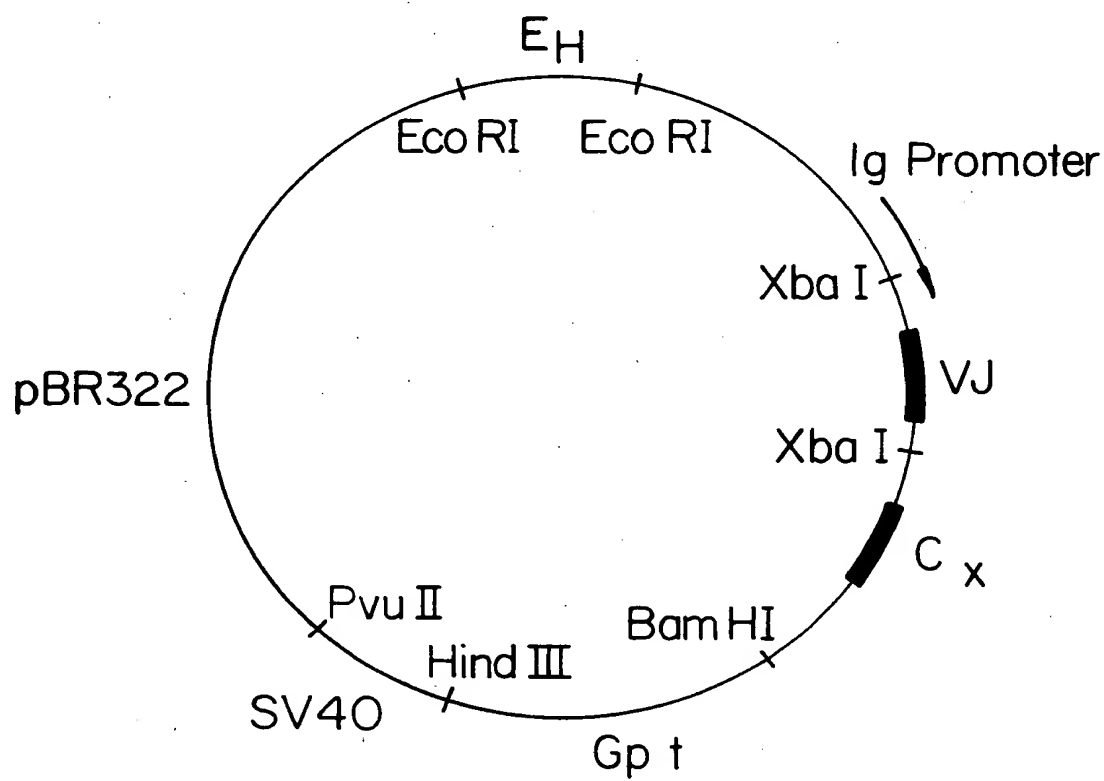


FIGURE 22

30 60  
 ATGGATTTTCAAGTGCAGATTTTCAGCTTCCTGCTAATCAGTGCCTCAGTCATACTGTCC  
 M D F Q V Q I F S F L L I S A S V I L S

90 120  
 AGAGGACAAATTGTTCTCACCCAGTCTCCAGCAATCATGTCTGCGTCTCCAGGGGCGAAG  
 R G Q I V L T Q S P A I M S A S P G E K

150 180  
 GTCACCATGACCTGCAGTGGCAGCTCAAGTGTAAGTTTCATGTACTGGTACCAGCAGAGG  
 V T M T C S G S S S V S F M Y W Y Q Q R

210 240  
 CCAGGATCCTCCCCCAGACTCCTGATTATGACACATCCAACCTGGCTTCTGGAGTCCCT  
 P G S S P R L L I Y D T S N L A S G V P

270 300  
 GTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGGAG  
 V R F S G S G S G T S Y S L T I S R M E

330 360  
 GCTGAAGATGCTGCCACTTATTACTGCCAGCAGTGGAGTACTTACCCGCTCACGTTTCGGT  
 A E D A A T Y Y C Q Q W S T Y P L T F G

GCTGGGACCAAGCTGGAGCTGAAA  
 A G T K L E L K

FIGURE 23A

30 60  
 ATGGCTGTCTTGGGGCTGCTCTTCTGCCTGGTGACATTCCCAAGCTGTGTCCTATCCCAG  
 M A V L G L L F C L V T F P S C V L S Q

90 120  
 GTGCAGCTGAAGCAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTCCATCACC  
 V Q L K Q S G P G L V Q P S Q S L S I T

150 180  
 TGCACAGTCTCTGGTTTCTCAGTAACAAGTTATGGTGTACACTGGATTGCGCCAGTCTCCA  
 C T V S G F S V T S Y G V H W I R Q S P

210 240  
 GGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAAGCACAGACTATAATGCA  
 G K G L E W L G V I W S G G S T D Y N A

270 300  
 GCTTTCATATCCAGACTGACCATCAGCAAGGACAACCTCCAAGAGCCAAGTTTCTTTAAA  
A F I S R L T I S K D N S K S Q V F F K

330 360  
 GTGAACAGTCTGCAACCTGCTGACACAGCCATATACTATTGTGCCAGAGCTGGGGACTAT  
 V N S L Q P A D T A I Y Y C A R A G D Y

390  
 AATTACGACGGTTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCTGCG  
N Y D G F A Y W G Q G T L V T V S A

FIGURE 23B



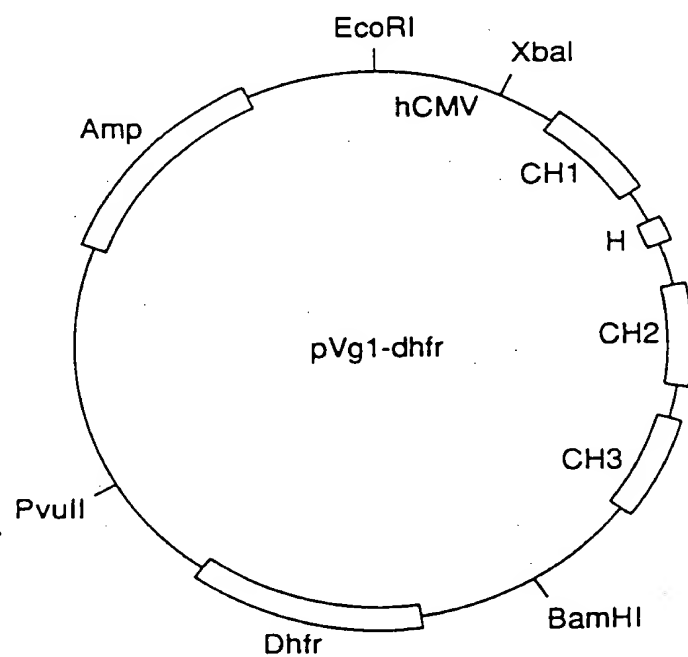


FIGURE 24A

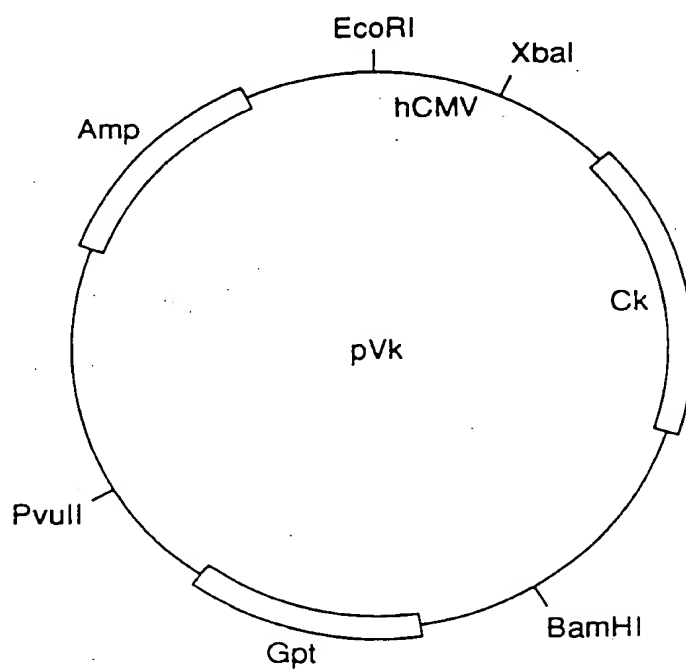


FIGURE 24B

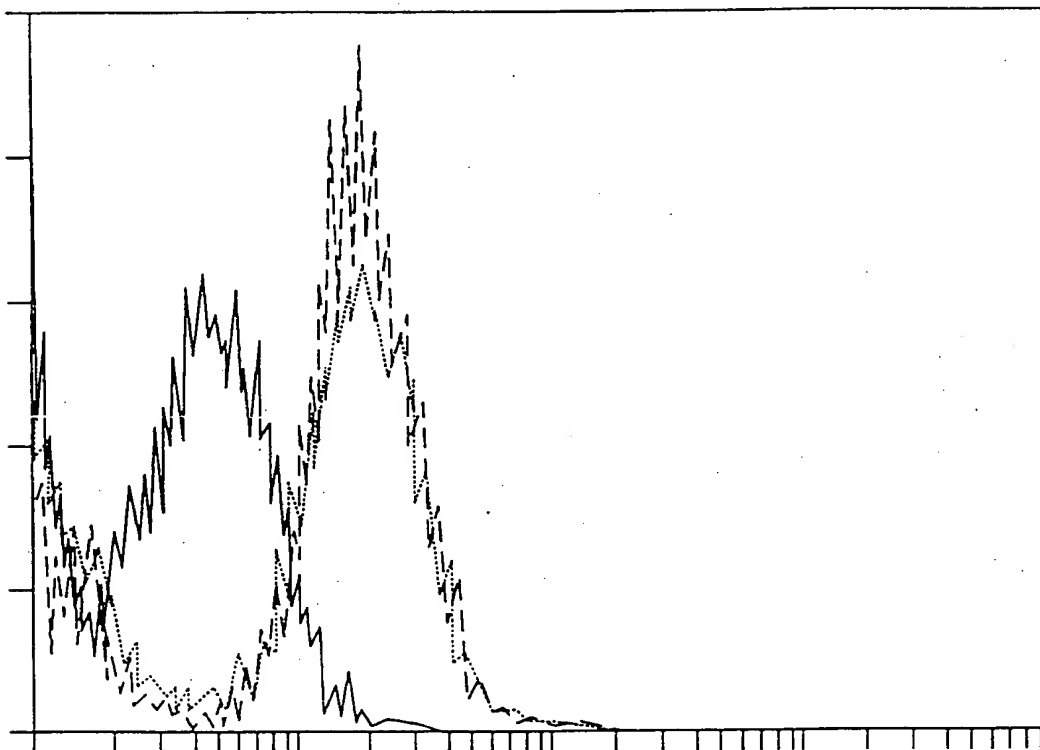


FIGURE 25

1	D	I	Q	M	T	Q	S	P	S	S	L	S	V	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	S	S	L	S	<u>A</u>	S	V	G	D	R	V	T
21	I	T	C	Q	A	S	Q	N	V	N	A	Y	L	N	W	Y	Q	Q	K	P
21	I	T	C	<u>S</u>	<u>G</u>	<u>S</u>	<u>S</u>	<u>S</u>	<u>V</u>		<u>S</u>	<u>F</u>	<u>M</u>	<u>Y</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>
41	G	L	A	P	K	L	L	I	Y	G	A	S	T	R	E	A	G	V	P	S
40	G	<u>K</u>	A	P	K	L	L	I	Y	<u>D</u>	<u>T</u>	<u>S</u>	<u>N</u>	<u>L</u>	<u>A</u>	<u>S</u>	G	V	P	S
61	R	F	S	G	S	G	S	G	T	D	F	T	F	T	I	S	S	L	Q	P
60	R	F	S	G	S	G	S	G	T	D	<u>Y</u>	T	F	T	I	S	S	L	Q	P
81	E	D	I	A	T	Y	Y	C	Q	Q	Y	N	N	W	P	P	T	F	G	Q
80	E	D	I	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>W</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>P</u>	<u>L</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>
101	G	T	K	V	E	V	K													
100	G	T	K	V	E	V	K													

FIGURE 26A

1	<u>A</u>	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
1	<u>E</u>	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
21	S	C	A	A	S	G	F	T	F	S	A	S	A	M	S	W	V	R	Q	A
21	S	C	A	A	S	G	F	T	<u>V</u>	<u>T</u>	<u>S</u>	<u>Y</u>	<u>G</u>	<u>V</u>	<u>H</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	K	G	L	E	W	V	A	W	K	Y	E	N	G	N	D	K	H	Y
41	P	G	K	G	L	E	W	V	<u>G</u>		<u>V</u>	<u>I</u>	<u>W</u>	<u>S</u>	<u>G</u>	<u>G</u>	<u>S</u>	<u>T</u>	<u>D</u>	<u>Y</u>
61	A	D	S	V	N	G	R	F	T	I	S	R	N	D	S	K	N	T	L	Y
60	<u>N</u>	<u>A</u>	<u>A</u>	<u>F</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>F</u>	<u>T</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>D</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>N</u>	<u>T</u>	<u>L</u>	<u>Y</u>
81	L	Q	M	N	G	L	Q	A	Z	V	S	A	I	Y	Y	C	A	R	D	A
80	L	Q	M	N	<u>S</u>	L	Q	A	E	<u>D</u>	<u>T</u>	A	I	Y	Y	C	A	R	<u>A</u>	
101	G	P	Y	V	S	P	T	F	F	A	H	W	G	Q	G	T	L	V	T	V
99	<u>G</u>	<u>D</u>	<u>Y</u>		<u>N</u>	<u>Y</u>	<u>D</u>	<u>G</u>	<u>F</u>	<u>A</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>
121	S	S																		
118	S	S																		

FIGURE 26B

vc13

```
      10      20      30      40      50      60
TTCTGCTGGT ACCAGTACAT GAAACTTACA CTTGAGCTGC CACTGCAGGT GATGGTGACG

      70      80      90     100
CGGTCACCCA CTGAGGCACT GAGGCTAGAT GGAGACTGGG TCATTTG
```

vc14

```
      10      20      30      40      50      60
CATGTACTGG TACCAGCAGA AGCCAGGAAA AGCTCCGAAA CTTCTGATTT ATGACACATC

      70      80      90     100     110     120
CAACCTGGCT TCTGGAGTCC CTTCCCGCTT CAGTGGCAGT GGGTCTGGGA CCGATTACAC

      130
CTTTACAATC TCTTCA
```

vc15

```
      10      20      30      40      50      60
TGTGTCTAGA AAAGTGTACT TACGTTTTAC CTCGACCTTG GTCCCTTGAC CGAACGTGAG

      70      80      90     100     110     120
CGGGTAAGTA CTCCACTGCT GGCAGTAATA AGTGGCTATA TCTTCCGGCT GAAGTGAAGA

      130
GATTGTAAAG GTGTAAT
```

vc16

```
      10      20      30      40      50      60
CACATCTAGA CCACCATGGA TTTTCAAGTG CAGATCTTCA GCTTCCTGCT AATCAGTGCC

      70      80      90     100
TCAGTCATAC TGTCCAGAGG AGATATTCAA ATGACCCAGT CTCCATCT
```

FIGURE 27A

vc11

```
      10      20      30      40      50      60
TAGTCTGTCG ACCCACCCT CCATATCACT CCCACCCACT CGAGTCCCTT TCCAGGAGCC

      70      80      90     100     110     120
TGGCGGACCC AGTGTACACC ATAACCTGTT ACGGTGAAAC CACTGGCGGC ACAAGACAGT

      130
CTCAGAGATC CTCCTGGC
```

vc12

```
      10      20      30      40      50      60
TGGTGGGTCG ACAGACTATA ATGCAGCTTT CATATCCAGA TTTACCATCA GCAGAGACAA

      70      80      90     100     110     120
CAGCAAGAAC ACACTGTATC TCCAAATGAA TAGCCTGCAA GCCGAGGACA CAGCCATATA

TTATTG
```

wps54

```
      10      20      30      40      50      60
ACACTCTAGA CCACCATGGC TGTCTTGGGG CTGCTCTTCT GCCTGGTGAC ATTCCCAAGC

      70      80      90     100     110     120
TGTGTCCTAT CCGCTGTCCA GCTGCTAGAG AGTGGTGGCG GTCTGGTGCA GCCAGGAGGA

      130
TCTCTGAGAC
```

wps57

```
      10      20      30      40      50      60
ACACTCTAGA AGTTAGGACT CACCTGAAGA GACAGTGACC AGAGTCCCTT GGCCCCAGTA

      70      80      90     100     110
AGCAAAACCG TCGTAATTAT AGTCCCAGC TCTGGCACAA TAATATATGG CTGTGTCC
```

FIGURE 27B

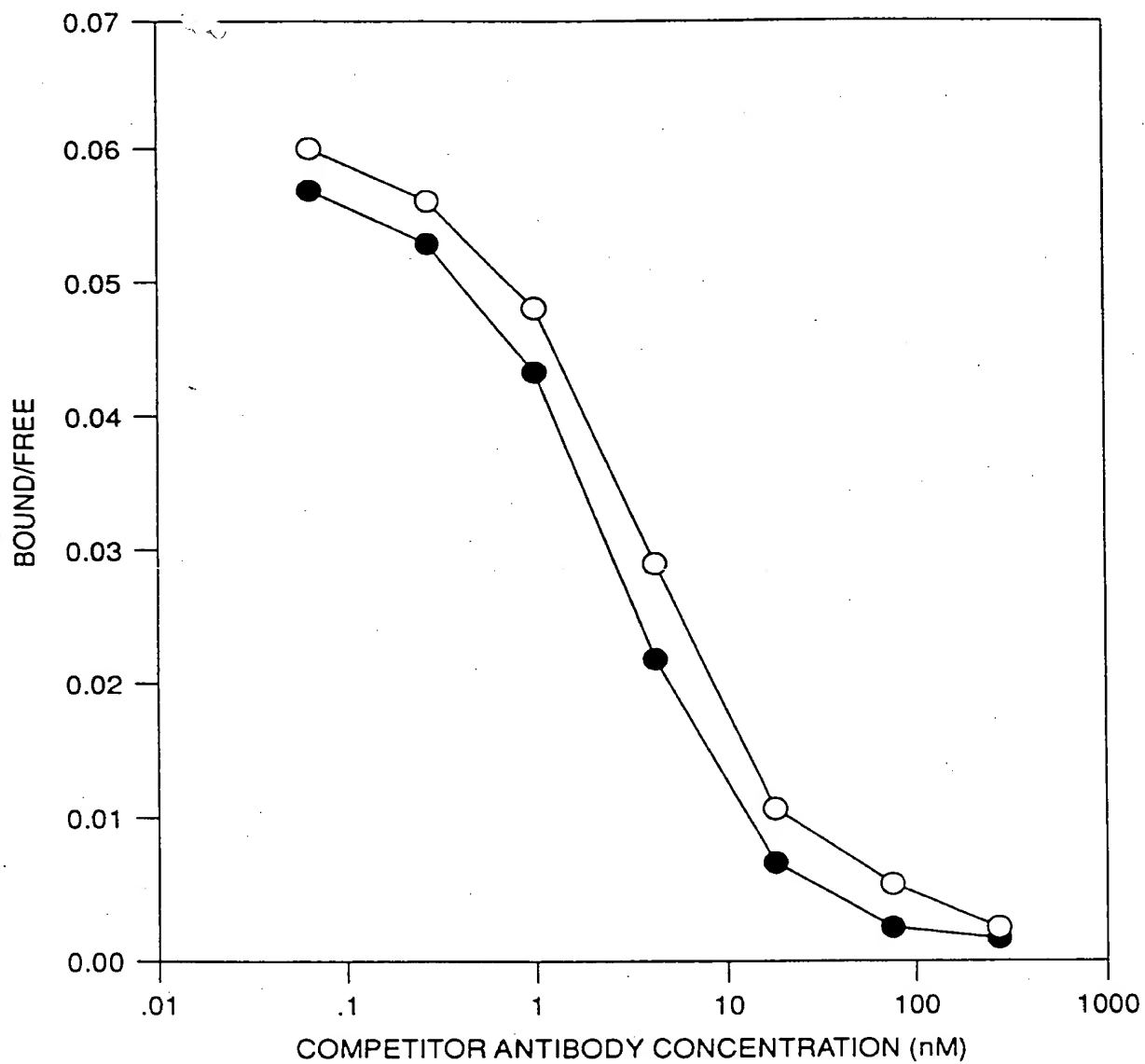


FIGURE 28

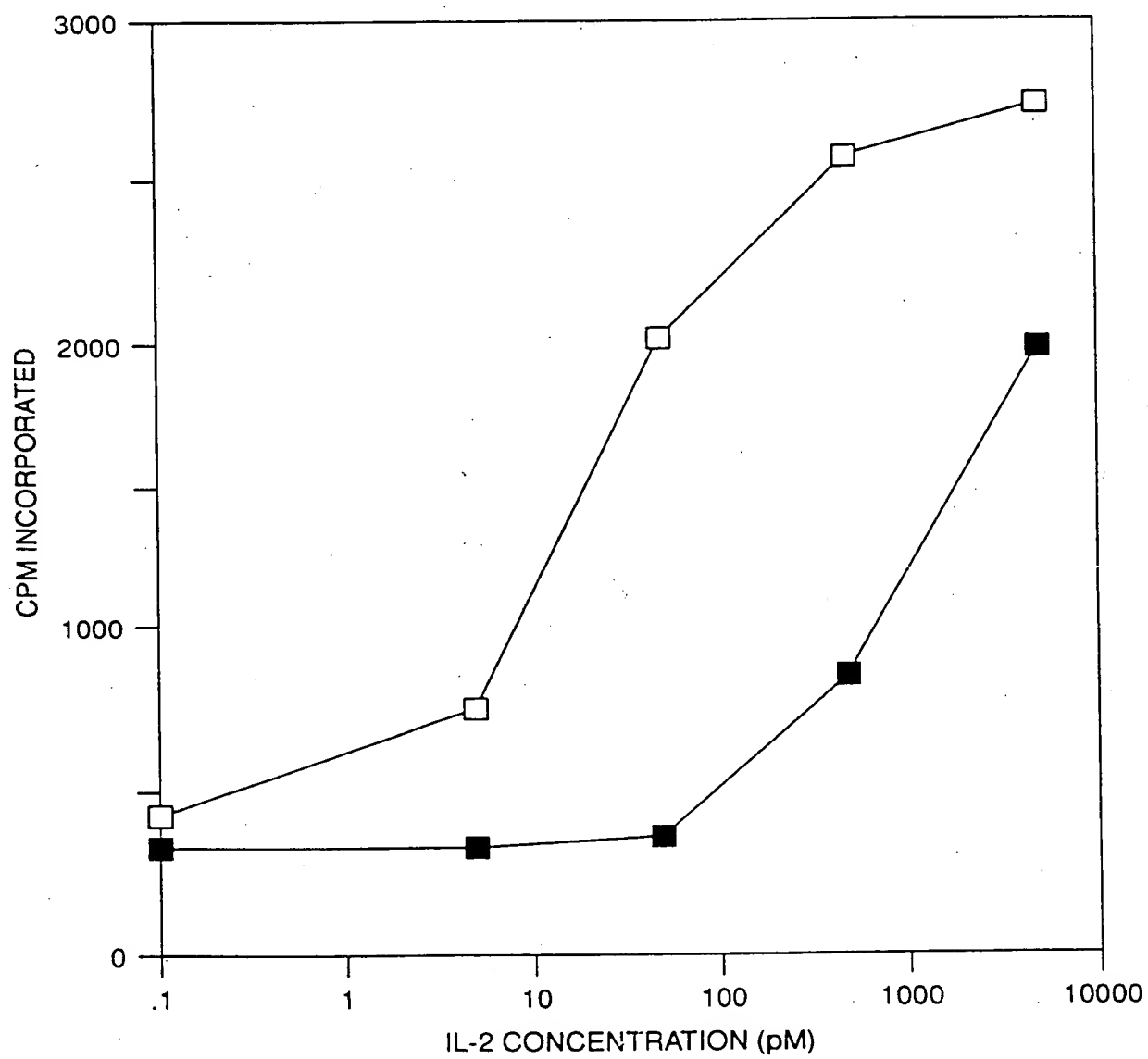


FIGURE 29





	1		5		10		15		20											
1	Q	V	Q	L	Q	S	D	A	E	L	V	K	P	G	A	S	V	K	I	
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
				25				30		35									40	
21	S	C	K	V	S	G	Y	T	F	T	D	H	T	I	H	W	M	K	Q	R
21	S	C	K	A	S	G	<u>Y</u>	T	F	<u>T</u>	D	H	T	I	H	W	<u>M</u>	R	Q	A
				45				50		52 a		55								
41	P	E	Q	G	L	E	W	F	G	Y	I	Y	P	R	D	G	H	T	R	Y
41	P	G	Q	G	L	E	W	<u>F</u>	G	Y	I	Y	P	R	D	G	H	T	R	Y
				60		65		70		75										
60	S	E	K	F	K	G	K	A	T	L	T	A	D	K	S	A	S	T	A	Y
60	A	E	K	F	K	G	K	<u>A</u>	T	I	T	A	D	E	S	T	N	T	A	Y
				80		82 a b c		85		90									95	
80	M	H	L	N	S	L	T	S	E	D	S	A	V	Y	F	C	A	R	G	R
80	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	Y	F	C	A	<u>R</u>	G	R
				100 a b c d				105		110										
97	D	S	R	E	R	N	G	F	A	Y	W	G	Q	G	T	L	V	T	V	S
97	D	S	R	E	R	N	G	F	A	Y	<u>W</u>	<u>G</u>	<u>Q</u>	G	<u>T</u>	L	V	T	V	S
				113																
113	A																			
113	S																			

FIGURE 30C

	1		5		10		15		20											
1	D	I	V	M	T	Q	S	H	K	F	M	S	T	S	V	G	D	R	V	S
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
				25				30		35									40	
21	I	T	C	K	A	S	Q	D	V	G	S	A	V	V	W	H	Q	Q	K	S
21	I	T	C	K	A	S	Q	D	V	G	S	A	V	V	W	<u>H</u>	Q	Q	K	P
				45				50		55										
41	G	Q	S	P	K	L	L	I	Y	W	A	S	T	R	H	T	G	V	P	D
41	G	K	A	P	K	L	L	<u>I</u>	Y	W	A	S	T	R	H	T	G	V	P	S
				65				70		75									80	
61	R	F	T	G	S	G	S	G	T	D	F	T	L	T	I	T	N	V	Q	S
61	R	F	<u>T</u>	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
				85				90		95									100	
81	E	D	L	A	D	Y	F	C	Q	Q	Y	S	I	F	P	L	T	F	G	A
81	D	D	F	A	T	Y	<u>F</u>	C	Q	Q	Y	S	I	F	P	L	T	F	G	Q
				105		107														
101	G	T	R	L	E	L	K													
101	G	T	K	V	E	V	K													

FIGURE 30D

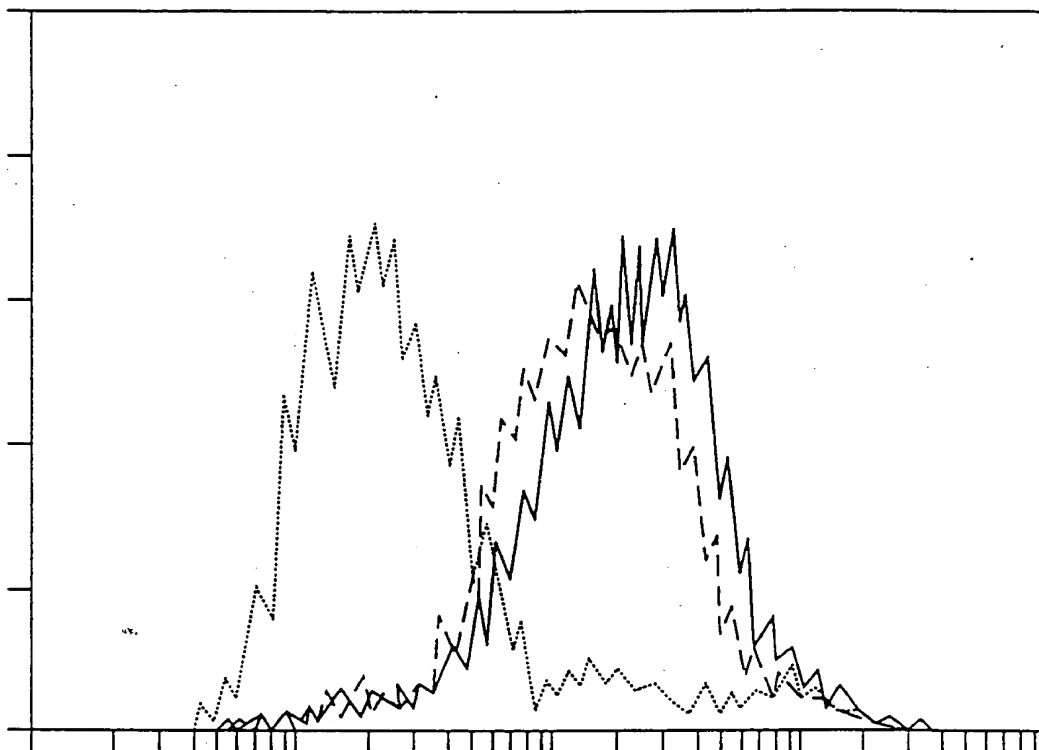


FIGURE 31A

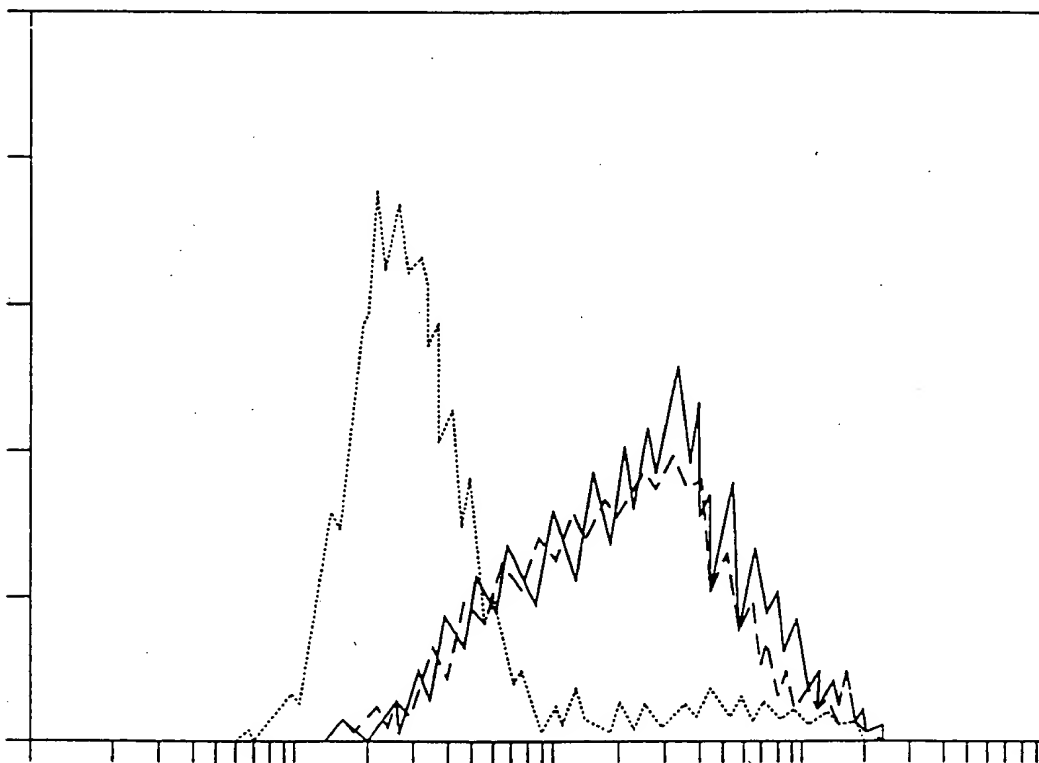


FIGURE 31B

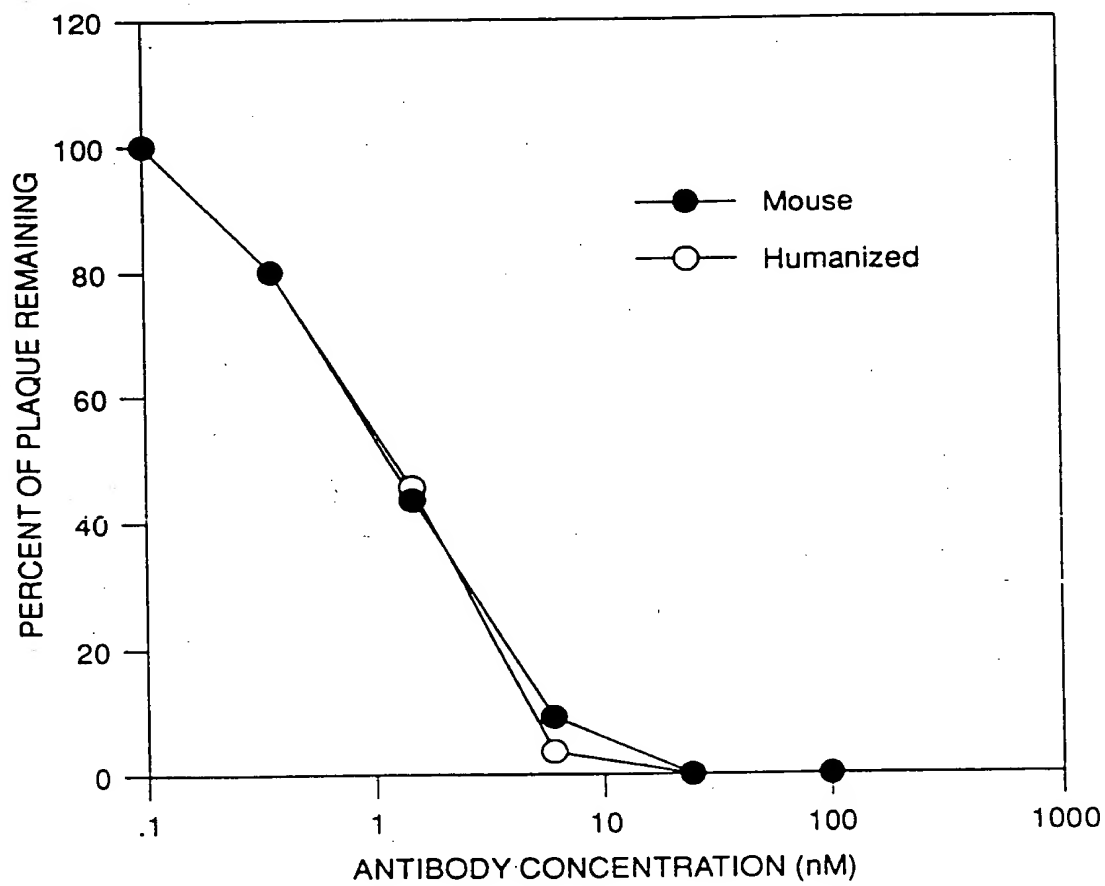


FIGURE 32A

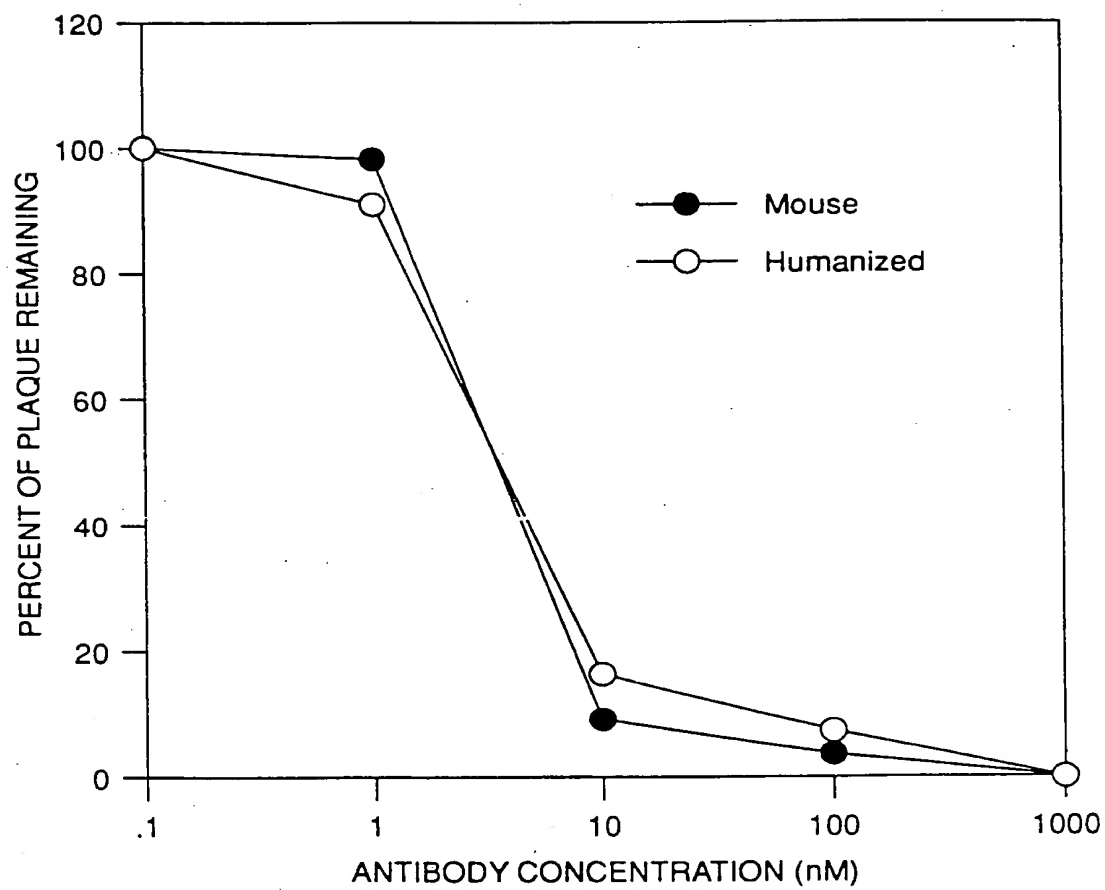


FIGURE 32B

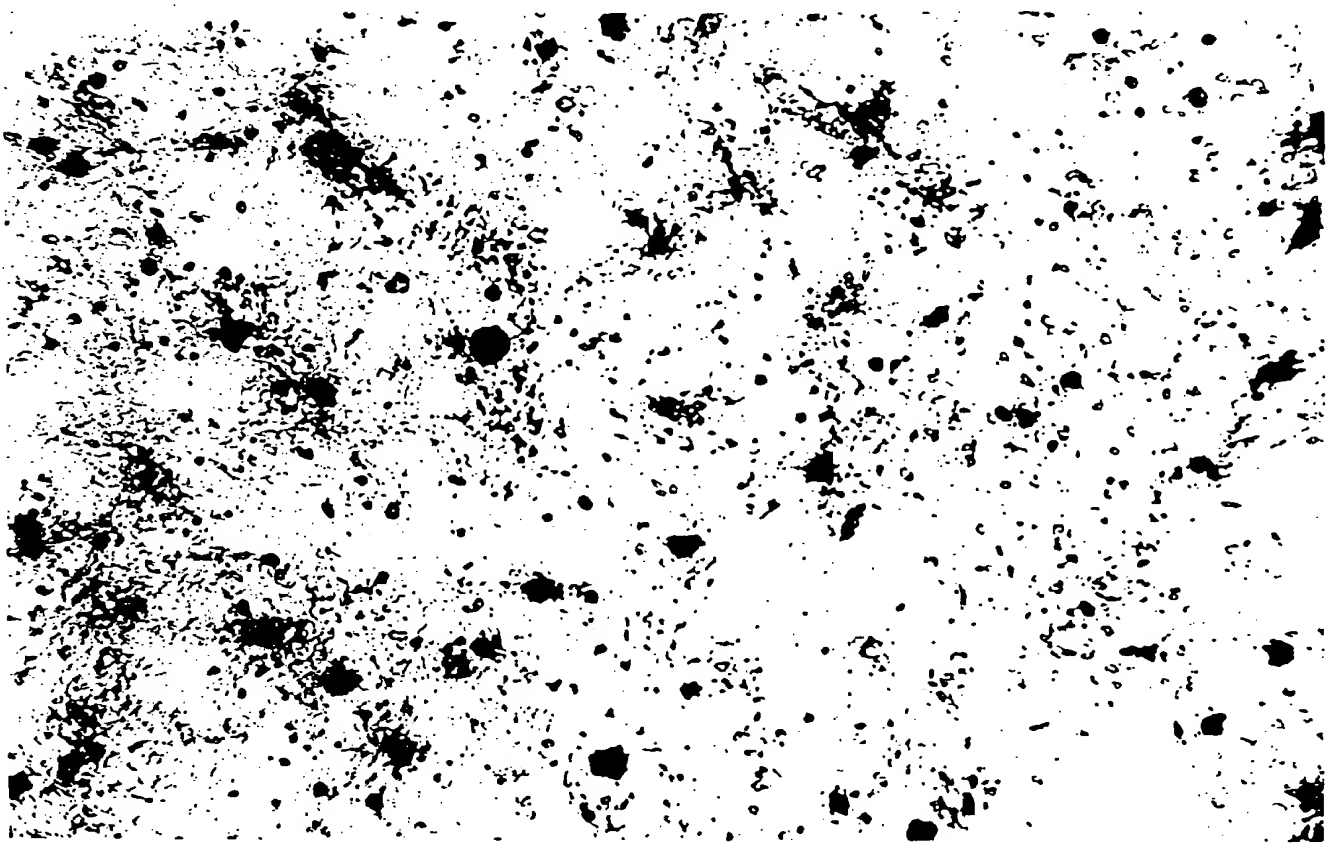


FIGURE 33A



FIGURE 33B

30 60  
 ATGGAGAAAGACACACTCCTGCTATGGGTCCTGCTTCTCTGGGTTCCAGGTTCCACAGGT  
 M E K D T L L L W V L L L W V P G S T G

90 120  
 GACATTGTGCTGACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCAGAGGGCCACC  
 D I V L T Q S P A S L A V S L G Q R A T

150 180  
 ATCTCCTGCAGAGCCAGCGAAAGTGTTGATAATTATGGCATTAGTTTTATGAACTGGTTC  
 I S C R A S E S V D N Y G I S F M N W F

210 240  
 CAACAGAAACCAGGACAGCCACCCAAACTCCTCATCTATGCTGCATCCAACCAAGGATCC  
 Q Q K P G Q P P K L L I Y A A S N Q G S

270 300  
 GGGTCCCTGCCAGGTTTGTAGTGGCAGTGGGCTCTGGGACAGACTTCAGCCTCAACATCCAT  
 G V P A R F S G S G S G T D F S L N I H

330 360  
 CCTATGGAGGAGGATGATACTGCAATGTATTTCTGTCTCAGCAAAGTAAGGAGGTTCCGTGG  
 P M E E D D T A M Y F C Q Q S K E V P W

390  
 ACGTTCGGTGGAGGCACCAAGCTGGAAATCAAA  
T F G G G T K L E I K

FIGURE 34A

30 60  
 ATGGGATGGAGCTGGATCTTTCTCTTCCTCCTGTCAGGAACTGCAGGCGTCCACTCTGAG  
 M G W S W I F L F L L S G T A G V H S E

90 120  
 GTCCAGCTTCAGCAGTCAGGACCTGAGCTGGTGAAACCTGGGGCCTCAGTGAAGATATCC  
 V Q L Q Q S G P E L V K P G A S V K I S

150 180  
 TGCAAGGCTTCTGGATACACATTCAGTACTACAACATGCACTGGGTGAAGCAGAGCCAT  
 C K A S G Y T F T D Y N M H W V K Q S H

210 240  
 GGAAAGAGCCTTGAGTGGATTGGATATATTTATCCTTACAATGGTGGTACTGGCTACAAC  
 G K S L E W I G Y I Y P Y N G G T G Y N

270 300  
 CAGAAGTTCAAGAGCAAGGCCACATTGACTGTAGACAATTCCTCCAGCACAGCCTACATG  
Q K F K S K A T L T V D N S S S T A Y M

330 360  
 GACGTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGCGCCCC  
 D V R S L T S E D S A V Y Y C A R G R P

390  
 GCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA  
A M D Y W G Q G T S V T V S S

FIGURE 34B

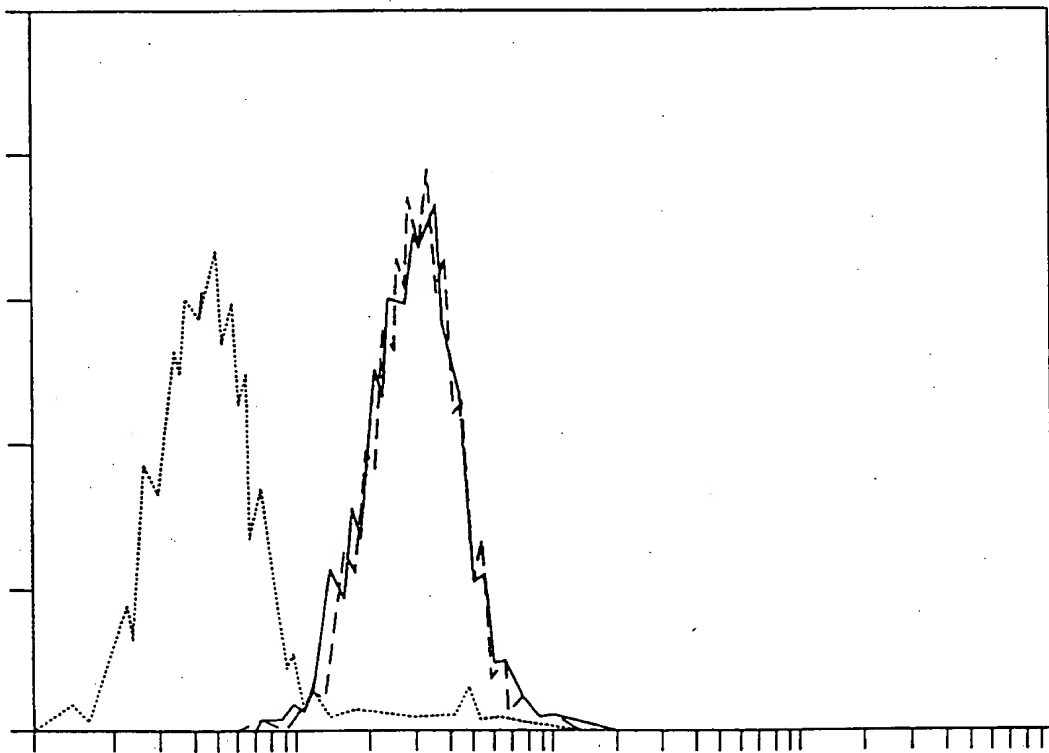


FIGURE 35

1	D	I	Q	M	T	Q	S	P	<u>S</u>	T	L	S	A	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	<u>S</u>	S	L	S	A	S	V	G	D	R	V	T
21	I	T	C	R	A	S	Q	S		I	N				T	W	L	A	W	Y
21	I	T	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>E</u>	<u>S</u>	<u>V</u>	<u>D</u>	<u>N</u>	<u>Y</u>	<u>G</u>	<u>I</u>	<u>S</u>	<u>F</u>	<u>M</u>	<u>N</u>	<u>W</u>	<u>F</u>
37	Q	Q	K	P	G	G	A	P	K	L	L	M	Y	K	A	S	S	L	E	S
41	Q	Q	K	P	G	G	A	P	K	L	L	<u>I</u>	Y	<u>A</u>	<u>A</u>	<u>S</u>	<u>N</u>	<u>Q</u>	<u>G</u>	<u>S</u>
57	G	V	P	S	R	F	I	G	S	G	S	G	T	E	F	T	L	T	I	S
61	G	V	P	S	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	T	I	S
77	S	L	Q	P	D	D	F	A	T	Y	Y	C	Q	Q	Y	N	S	D	S	K
81	S	L	Q	P	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>S</u>	<u>K</u>	<u>E</u>	<u>V</u>	<u>P</u>	<u>W</u>
97	M	F	G	Q	G	T	K	V	E	V	K									
101	<u>T</u>	F	G	Q	G	T	K	V	E	<u>I</u>	K									

FIGURE 36A

1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	G	T	F	S	R	S	A	I	I	W	V	R	Q	A
21	S	C	K	A	S	G	<u>Y</u>	T	F	<u>T</u>	<u>D</u>	<u>Y</u>	<u>N</u>	<u>M</u>	<u>H</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	Q	G	L	E	W	M	G	G	I	V	P	M	F	G	P	P	N	Y
41	P	G	Q	G	L	E	W	<u>I</u>	G	<u>Y</u>	<u>I</u>	<u>Y</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>G</u>	<u>Y</u>
61	A	Q	K	F	Q	G	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>S</u>	<u>K</u>	<u>A</u>	T	I	T	A	D	E	S	T	N	T	A	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	F	Y	F	C	A	G	G	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	C	A	<u>R</u>	<u>G</u>	
101	G	I	Y	S	P	E	E	Y	N	G	G	L	V	T	V	S	S			
100	<u>R</u>	<u>P</u>	<u>A</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	L	V	T	V	S	S			

FIGURE 36B



ma1

```
      10      20      30      40      50      60
TATATCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGAACTGCT

      70      80      90     100     110     120
GGCGTCCACT CTCAGGTTCA GCTGGTGCAG TCTGGAGCTG AGGTGAAGAA GCCTGGGAGC

      130
TCAGTGAAGG TT
```

ma2

```
      10      20      30      40      50      60
AGCCGGTACC ACCATTGTAA GGATAAATAT ATCCAATCCA TTCCAGGCCT TGGCCAGGAG

      70      80      90     100     110     120
CCTGCCTCAC CCAGTGCATG TTGTAGTCAG TGAAGGTGTA GCCAGAAGCT TTGCAGGAAA

      130
CCTTCACTGA GCT
```

ma3

```
      10      20      30      40      50      60
TGGTGGTACC GGCTACAACC AGAAGTTCAA GAGCAAGGCC ACAATTACAG CAGACGAGAG

      70      80      90     100     110
TACTAACACA GCCTACATGG AACTCTCCAG CCTGAGGTCT GAGGACACTG CA
```

ma4

```
      10      20      30      40      50      60
TATATCTAGA GGCCATTCTT ACCTGAAGAG ACAGTGACCA GAGTCCCTTG GCCCCAGTAG

      70      80      90     100     110
TCCATAGCGG GGCGCCCTCT TGCGCAGTAA TAGACTGCAG TGTCCTCAGA C
```

FIGURE 37A

ma5

```
      10      20      30      40      50      60
TATATCTAGA CCACCATGGA GAAAGACACA CTCCTGCTAT GGGTCCTGCT TCTCTGGGTT

      70      80      90     100     110     120
CCAGGTTCCA CAGGTGACAT TCAGATGACC CAGTCTCCGA GCTCTCTGTC CGCATCAGTA
```

GG

ma6

```
      10      20      30      40      50      60
TCAGAAGCTT AGGAGCCTTC CCGGGTTTCT GTTGGAACCA GTTCATAAAG CTAATGCCAT

      70      80      90     100     110     120
AATTGTCGAC ACTTTCGCTG GCTCTGCATG TGATGGTGAC CCTGTCTCCT ACTGATGCGG
```

AC

ma7

```
      10      20      30      40      50      60
TCCTAAGCTT CTGATTTACG CTGCATCCAA CCAAGGCTCC GGGGTACCCT CTCGCTTCTC

      70      80      90     100     110
AGGCAGTGGA TCTGGGACAG ACTTCACTCT CACCATTTC A TCTCTGCAGC CTGATGACT
```

ma8

```
      10      20      30      40      50      60
TATATCTAGA CTTTGGATTC TACTTACGTT TGATCTCCAC CTTGGTCCCT TGACCGAACG

      70      80      90     100     110
TCCACGGAAC CTCCTTACTT TGCTGACAGT AATAGGTTGC GAAGTCATCA GGCTGCAG
```

FIGURE 37B

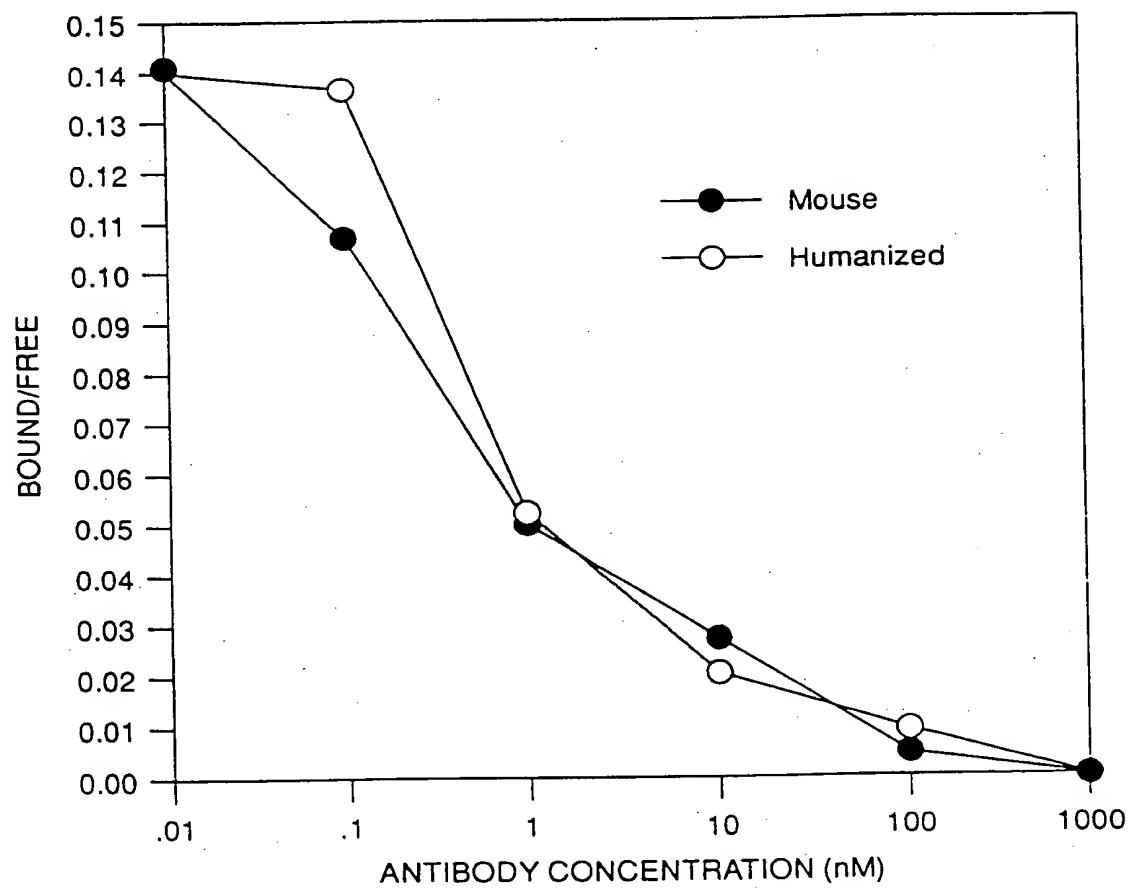


FIGURE 38

30 60  
 ATGGTTTTTCACACCTCAGATACTTGGACTTATGCTTTTTTGGATTTCAGCCTCCAGAGGT  
 M V F T P Q I L G L M L F W I S A S R G  
 ↓  
 90 120  
 GATATTGTGCTAACTCAGTCTCCAGCCACCCTGTCTGTGACTCCGGGAGATAGCGTCAGT  
 D I V L T Q S P A T L S V T P G D S V S  
 150 180  
 CTTTCCTGCAGGGCCAGCCAAAGTATTAGCAACAACCTACACTGGTATCAACAAAAATCA  
 L S C R A S Q S I S N N L H W Y Q Q K S  
 210 240  
 CATGAGTCTCCAAGGCTTCTCATCAAGTATGCTTCCCAGTCCATCTCTGGGATCCCCCTCC  
 H E S P R L L I K Y A S Q S I S G I P S  
 270 300  
 AGGTTCAAGTGGCAGTGGATCAGGGACAGATTTCACTCTCAGTGTCAACGGTGTGGAGACT  
 R F S G S G S G T D F T L S V N G V E T  
 330 360  
 GAAGATTTTGAATGTATTTCTGTCAACACACTAACAGTTGGCCTCATACGTTTCGGAGGG  
 E D F G M Y F C Q Q S N S W P H T F G G  
 GGGACCAAGCTGGAAATAAAA  
 G T K L E I K

FIGURE 39A

30 60  
 ATGGGATGGAGCTGGATCTTTCTCTTCCTCCTGTCAGGAAGTGCAGGTGTCCACTCTGAG  
 M G W S W I F L F L L S G T A G V H S E  
 90 120  
 GTCCAGCTGCAACAGTCTGGACCTGAGCTGGTGAAGCCTGGAGCTTCAATGAAGATATCC  
 V Q L Q Q S G P E L V K P G A S M K I S  
 150 180  
 TGCAAGGCTTCTGTTTACTCATTCACTGGCTACACCATGAAGTGGGTGAAGCAGAGCCAT  
 C K A S V Y S F T G Y T M N W V K Q S H  
 210 240  
 GGACAGAACCTTGAGTGGATTGGACTTATTAATCCTTACAATGGTGGTACTAGCTACAAC  
 G Q N L E W I G L I N P Y N G G T S Y N  
 270 300  
 CAGAAGTTCAAGGGGAAGGCCACATTAAGTGTAGACAAGTCATCCAACACAGCCTACATG  
Q K F K G K A T L T V D K S S N T A Y M  
 330 360  
 GAGCTCCTCAGTCTGACATCTGCGGACTCTGCAGTCTATTACTGTACAAGACGGGGGTTT  
 E L L S L T S A D S A V Y Y C I R R G E  
 390  
 CGAGACTATTCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA  
R D Y S M D Y W G Q G T S V T V S S

FIGURE 39B

1	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T
1	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T
21	L	S	C	R	A	S	Q	S	V	S	S	G	Y	L	G	W	Y	Q	Q	K
21	L	S	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>		<u>I</u>	<u>S</u>	<u>N</u>	<u>N</u>	<u>L</u>	<u>H</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>
41	P	G	Q	A	P	R	L	L	I	Y	G	A	S	S	R	A	T	G	I	P
40	P	G	Q	A	P	R	L	L	I	<u>K</u>	<u>Y</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>I</u>	<u>S</u>	G	I	P
61	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L	E
60	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L	E
81	P	E	D	F	A	V	Y	Y	C	Q	Q	Y	G	S	L	G	R	T	F	G
80	P	E	D	F	A	V	Y	Y	C	Q	<u>Q</u>	<u>S</u>	<u>N</u>	<u>S</u>	<u>W</u>	<u>P</u>	<u>H</u>	<u>T</u>	<u>F</u>	<u>G</u>
101	Q	G	T	K	V	E	I	K												
100	Q	G	T	K	V	E	I	K												

FIGURE 40A

1	Q	V	Q	L	<u>M</u>	Q	S	G	A	E	V	K	K	P	G	S	S	V	R	V
1	Q	V	Q	L	<u>V</u>	Q	S	G	A	E	V	K	K	P	G	S	S	V	R	V
21	S	C	K	T	S	G	G	T	F	V	D	Y	K	G	L	W	V	R	Q	A
21	S	C	K	<u>A</u>	S	G	<u>Y</u>	<u>S</u>	<u>F</u>	<u>T</u>	<u>G</u>	<u>Y</u>	<u>T</u>	<u>M</u>	<u>N</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	K	G	L	E	W	V	G	Q	I	P	L	R	F	N	G	E	V	K
41	P	G	K	G	L	E	W	V	G	<u>L</u>	<u>I</u>	<u>N</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>S</u>	<u>Y</u>
61	N	P	G	S	V	V	R	V	S	V	S	L	K	P	S	F	N	Q	A	H
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>G</u>	<u>R</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>L</u>	<u>K</u>	<u>P</u>	<u>S</u>	<u>F</u>	<u>N</u>	<u>Q</u>	<u>A</u>	<u>Y</u>
81	M	E	L	S	S	L	F	S	E	D	T	A	V	Y	Y	C	A	R	E	Y
81	M	E	L	S	S	L	F	S	E	D	T	A	V	Y	Y	C	<u>T</u>	<u>R</u>	<u>R</u>	
101	G	F	D	T	S	D	Y	Y	Y	Y	Y	W	G	Q	G	T	L	V	T	V
100	<u>G</u>	<u>F</u>			<u>R</u>	<u>D</u>	<u>Y</u>	<u>S</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>
121	S	S																		
118	S	S																		

FIGURE 40B

jb16

```
      10      20      30      40      50      60
TAGATCTAGA CCACCATGGT TTTCACACCT CAGATACTAG GACTCATGCT CTTCTGGATT
      70      80      90     100     110     120
TCAGCCTCCA GAGGTGAAAT TGTGCTAACT CAGTCTCCAG GCACCCTAAG CTTATCACCG
```

GGAGAAAGG

jb17

```
      10      20      30      40      50      60
TAGACAGAAT TCACGCGTAC TTGATAAGTA GACGTGGAGC TTGTCCAGGT TTTTGTGGT
      70      80      90     100     110     120
ACCAGTGTAG GTTGTGCTA ATACTTTGGC TGGCCCTGCA GGAAAGTGTA GCCCTTTCTC
```

CCGGTGAT

jb18

```
      10      20      30      40      50      60
AAGAGAATTC ACGCGTCCCA GTCCATCTCT GGAATACCCG ATAGG TTCAG TGGCAGTGGA
      70      80      90     100     110
TCAGGGACAG ATTTCACTCT CACAATAAGT AGGCTCGAGC CGGAAGATTT TGC
```

jb19

```
      10      20      30      40      50      60
TAGATCTAGA GTTGAGAAGA CTACTTACGT TTTATTTCTA CCTTGGTCCC TTGTCCGAAC
      70      80      90     100     110
GTATGAGGCC AACTGTTACT CTGTTGACAA TAATACACAG CAAAATCTTC CGGCTC
```

FIGURE 41A

jb20

```
      10      20      30      40      50      60
TATATCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGAACTGCA

      70      80      90     100     110     120
GGTGTCCACT CTCAAGTCCA ACTGGTACAG TCTGGAGCTG AGGTAAAAA GCCTGGAAGT

      130
TCAGTAAGAG TTTC
```

jb21

```
      10      20      30      40      50      60
TATATAGGTA CCACCATTGT AAGGATTAAT AAGTCCAACC CACTCAAGTC CTTTTCAGG

      70      80      90     100     110     120
TGCCTGTCTC ACCCAGTTCA TGGTATACCC AGTGAATGAG TATCCGGAAG CTTTGCAGGA

      130
AACTCTTACT GAAC
```

jb22

```
      10      20      30      40      50      60
TATATAGGTA CCAGCTACAA CCAGAAGTTC AAGGGCACAG TTACAGTTC TTTGAAGCCT

      70      80      90     100     110
TCATTTAACC AGGCCTACAT GGAGCTCAGT AGTCTGTTTT CTGAAGACAC TGCAGT
```

jb23

```
      10      20      30      40      50      60
TATATCTAGA GGCCATTCTT ACCTGAGGAG ACGGTGACTA AGGTCCTTG ACCCCAGTAG

      70      80      90     100     110
TCCATAGAAT AGTCTCGAAA CCCCCGTCTT CTACAGTAAT AGACTGCAGT GTCTTC
```

FIGURE 41B

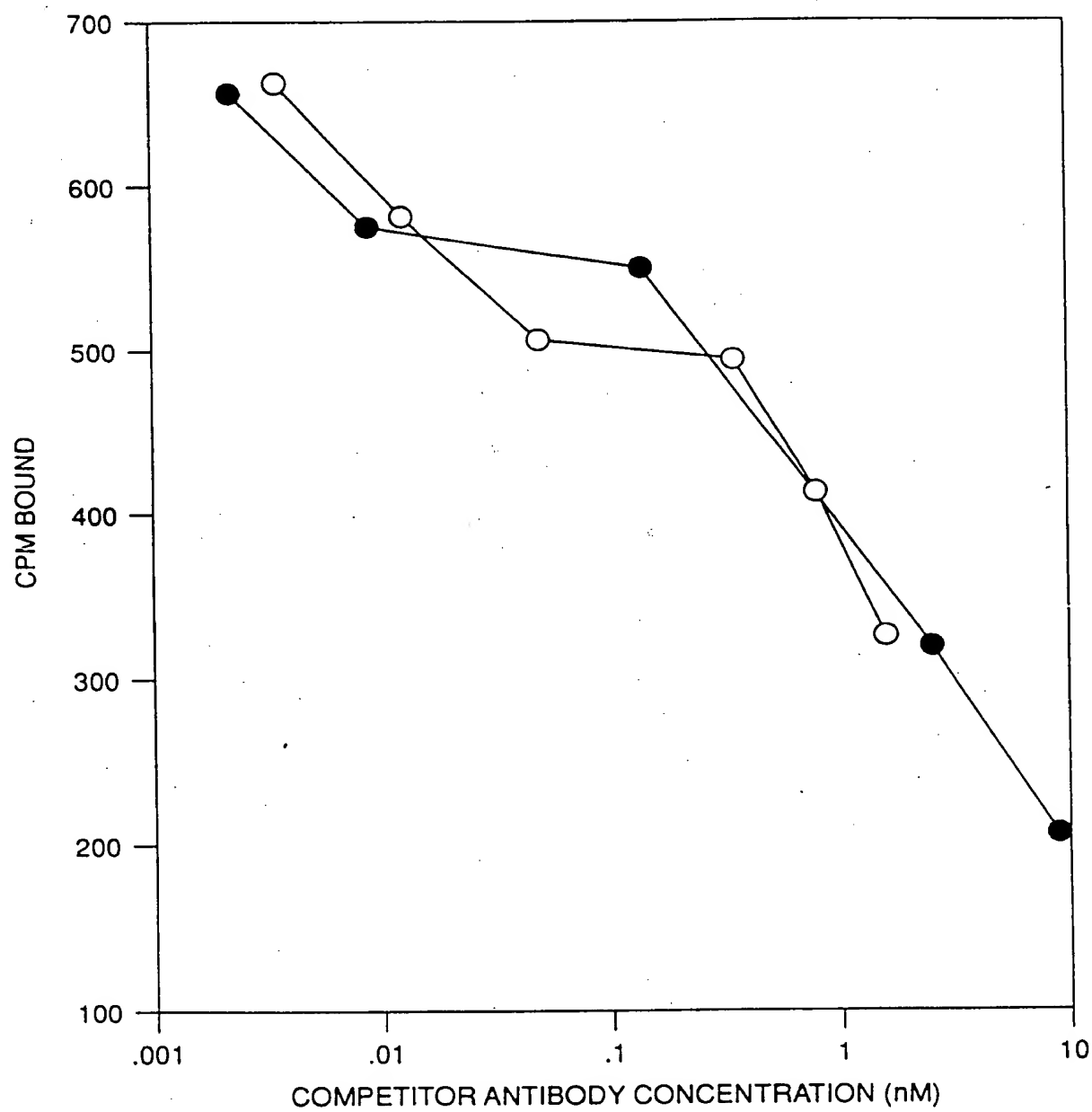


FIGURE 42



30 60  
 ATGCATCAGACCAGCATGGGCATCAAGATGGAATCACAGACTCTGGTCTTCATATCCATA  
 M H Q T S M G I K M E S Q T L V F I S I

90 120  
 CTGCTCTGGTTATATGGTGCTCATGGGAACATTGTTATGACCCAATCTCCCAAATCCATG  
 L L W L Y G A D G N I V M T Q S P K S M

150 180  
 TACGTGTCAATAGGAGAGAGGGTCACCTTGAGCTGCAAGGCCAGTGAAAATGTGGATACT  
 Y V S I G E R V T L S C K A S E N V D T

210 240  
 TATGTATCCTGGTATCAACAGAAACCAGAGCAGTCTCCTAAACTGCTGATATATGGGGCA  
Y V S W Y Q Q K P E Q S P K L L I Y G A

270 300  
 TCCAACCGGTACACTGGGGTCCACGATCGCTTCACGGGCAGTGGATCTGCAACAGATTTC  
S N R Y T G V H D R F T G S G S A T D F

330 360  
 ACTCTGACCATCAGCAGTGTGCAGGCTGAAGACCTTGCAGATTATCACTGTGGACAGAGT  
 T L T I S S V Q A E D L A D Y H C G Q S

390  
 TACAACTATCCATTACGTTTCGGCTCGGGGACAAAGTTGGAAATAAAG  
Y N Y P F T F G S G T K L E I K

FIGURE 43A

. . . 30 . . . 60  
 ATGACATCACTGTTCTCTCTACAGTTACCGAGCACACAGGACCTCGCCATGGGATGGAGC  
 M T S L F S L Q L P S T Q D L A M G W S

. . . 90 . . . 120  
 TGTATCATCCTCTTCTTGGTAGCAACAGCTACAGGTGTCCTCTCCCAGGTCCAAGTGCAG  
 C I I L F L V A T A T G V L S Q V Q L Q

. . . 150 . . . 180  
 CAGCCTGGGGCTGACCTTGTGATGCCTGGGGCTCCAGTGAAGCTGTCCTGCTTGGCTTCT  
 Q P G A D L V M P G A P V K L S C L A S

. . . 210 . . . 240  
 GGCTACATCTTCACCAGCTCCTGGATAAACTGGGTGAAGCAGAGGCCTGGACGAGGCCTC  
 G Y I F T S S W I N W V K Q R P G R G L

. . . 270 . . . 300  
 GAGTGGATTGGAAGGATTGATCCTTCCGATGGTGAAGTTCACTACAATCAAGATTTCAAG  
 E W I G R I D P S D G E V H Y N Q D F K

. . . 330 . . . 360  
 GACAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTACATCCAAGTCAACAGC  
D K A T L T V D K S S S T A Y I Q L N S

. . . 390 . . . 420  
 CTGACATCTGAGGACTCTGCGGTCTATTACTGTGCTAGAGGATTTCTGCCCTGGTTTGCT  
 L T S E D S A V Y Y C A R G F L P W F A

. . . 450  
 GACTGGGGCCAAGGGACTCTGGTCACTGTCTCTGCA  
D W G Q G T L V T V S A

FIGURE 43B

1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	C	R	A	S	Q	S	I	N	T	W	L	A	W	Y	Q	Q	K	P
21	I	T	C	<u>K</u>	<u>A</u>	<u>S</u>	<u>E</u>	<u>N</u>	<u>V</u>	<u>D</u>	<u>T</u>	<u>Y</u>	<u>V</u>	<u>S</u>	<u>W</u>	<u>Y</u>	Q	Q	K	P
41	G	K	A	P	K	L	L	M	Y	K	A	S	S	L	E	S	G	V	P	S
41	G	K	A	P	K	L	L	<u>I</u>	Y	<u>G</u>	<u>A</u>	<u>S</u>	<u>N</u>	<u>R</u>	<u>Y</u>	<u>T</u>	G	V	P	S
61	R	F	I	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
61	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	T	I	S	S	L	Q	P
81	D	D	F	A	T	Y	Y	C		Q	Q	Y	N	S	D	S	K	M	F	G
81	D	D	F	A	T	Y	Y	C	<u>G</u>	<u>Q</u>	<u>S</u>	<u>Y</u>	<u>N</u>		<u>Y</u>	<u>P</u>	<u>F</u>	<u>T</u>	F	G
100	Q	G	T	K	V	E	V	K												
100	Q	G	T	K	V	E	V	K												

FIGURE 44A

1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	G	T	F	S	R	S	A	I	I	W	V	R	Q	A
21	S	C	K	A	S	G	<u>Y</u>	<u>I</u>	<u>F</u>	<u>T</u>	<u>S</u>	<u>S</u>	<u>W</u>	<u>I</u>	<u>N</u>	W	V	R	Q	A
41	P	G	Q	G	L	E	W	M	G	G	I	V	P	M	F	G	P	P	N	Y
41	P	G	Q	G	L	E	W	M	G	<u>R</u>	<u>I</u>	<u>D</u>	<u>P</u>	<u>S</u>	<u>D</u>	<u>G</u>	<u>E</u>	<u>V</u>	<u>H</u>	<u>Y</u>
61	A	Q	K	F	Q	G	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>D</u>	<u>F</u>	<u>K</u>	<u>D</u>	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	F	Y	F	C	A	G	G	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	C	A	<u>R</u>	<u>G</u>	<u>F</u>
101	G	I	Y	S	P	E	E	Y	N	G	G	L	V	T	V	S	S			
101	<u>L</u>	<u>P</u>	<u>W</u>	<u>F</u>	<u>A</u>	<u>D</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	L	V	T	V	S	S			

FIGURE 44B

rh10

10	20	30	40	50	60
TTTTTTCTAG	ACCACCATGG	AGACCGATAC	CCTCCTGCTA	TGGGTCCTCC	TGCTATGGGT
70	80	90	100	110	
CCCAGGATCA	ACCGGAGATA	TTCAGATGAC	CCAGTCTCCG	TCGACCCTCT	CTGCT

rh11

10	20	30	40	50	60
TTTTAAGCTT	GGGAGCTTTG	CCTGGCTTCT	GCTGATACCA	GGATACATAA	GTATCCACAT
70	80	90	100	110	120
TTTCACTGGC	CTTGCAGGTT	ATGGTGACCC	TATCCCCGAC	GCTAGCAGAG	AGGTTCCACG

rh12

10	20	30	40	50	60
TTTTAAGCTT	CTAATTTATG	GGGCATCCAA	CCGGTACACT	GGGGTACCTT	CACGCTTCAG
70	80	90	100	110	
TGGCAGTGGA	TCTGGGACCG	ATTTCACCCT	CACAATCAGC	TCTCTGCAGC	CAGATGAT

rh13

10	20	30	40	50	60
TTTTTTCTAG	AGCAAAAGTC	TACTTACGTT	TGACCTCCAC	CTTGGTCCCC	TGACCGAACG
70	80	90	100	110	120
TGAATGGATA	GTTGTAACTC	TGTCCGCAGT	AATAAGTGGC	GAAATCATCT	GGCTCCAGAG

FIGURE 45A

rh20

```
      10      20      30      40      50      60
TTTTTCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGTACCGCG

      70      80      90     100     110
GGCGTGCACT CTCAGGTCCA GCTTGTCCAG TCTGGGGCTG AAGTCAAGAA ACCT
```

rh21

```
      10      20      30      40      50      60
TTTTGAATTC TCGAGACCCT GTCCAGGGGC CTGCCTTACC CAGTTTATCC AGGAGCTAGT

      70      80      90     100     110     120
AAAGATGTAG CCAGAAGCTT TGCAGGAGAC CTTACGCGAG CTCCCAGGTT TCTTGACTTC
```

A

rh22

```
      10      20      30      40      50      60
TTTTGAATTC TCGAGTGGAT GGGAAGGATT GATCCTTCCG ATGGTGAAGT TCACTACAAT

      70      80      90     100     110     120
CAAGATTTCA AGGACCGTGT TACAATTACA GCAGACGAAT CCACCAATAC AGCCTACATG

     130
GAACTGAGCA GCCTGAG
```

rh23

```
      10      20      30      40      50      60
TTTTTCTAGA GGTTTAAAG ACTCACCTGA GGAGACTGTG ACCAGGGTTC CTTGGCCCCA

      70      80      90     100     110     120
GTCAGCAAAC CAGGGCAGAA ATCCTCTTGC ACAGTAATAG ACTGCAGTGT CCTCTGATCT

     130
CAGGCTGCTC AGTT
```

FIGURE 45B

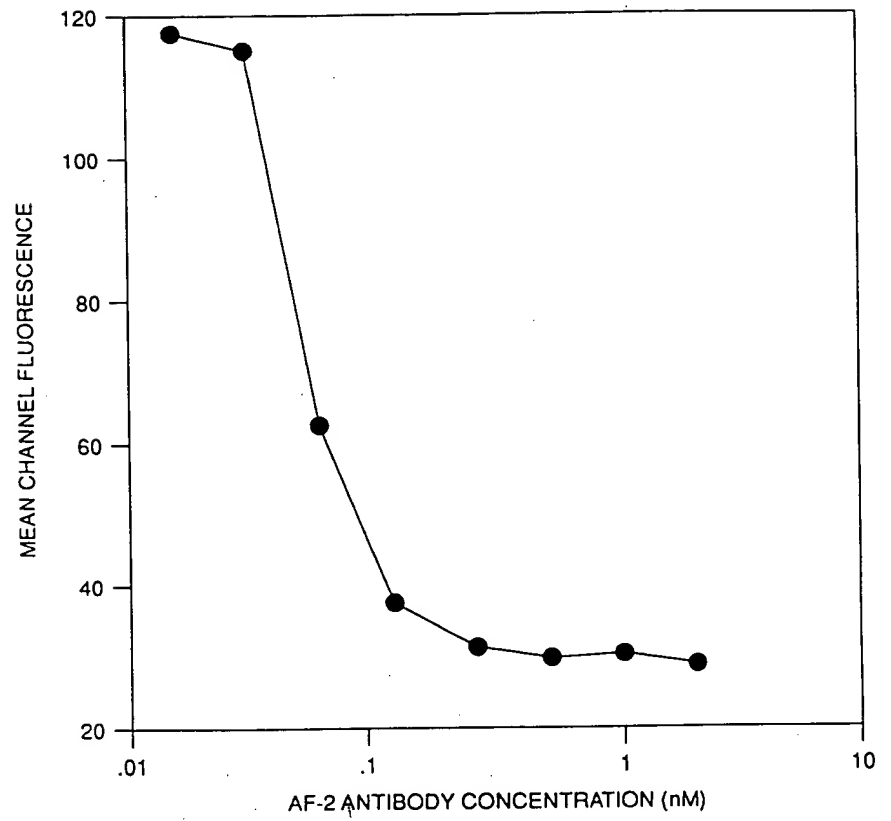


FIGURE 46